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ABSTRACT

This study sought to probe the contention that curricular specialization in higher education produces a polarization between the scientific and humanistic cultures. Two randomly selected panels of men enrolled at 25 universities were identified from student directories, and followed by mail surveys during three successive summers. Results were analyzed for 1,858 men who responded to all three surveys. Panels were selected so that during the longitudinal study Panel A members received increasing exposures to chosen major fields of study, while Panel B members received steady (or diminishing) exposures to such major fields. In a quasi-experimental design, changes in student attitudes and in perceived characteristics of peers and teachers were related to temporal variations in the degree of exposure to major fields of study. Predictions concerning differential accentuation of initial major field differences were generally unconfirmed for the attitudes measures, thus failing to replicate the results previously reported by Feldman and Newcomb. Implications for interpreting the impacts of major fields of study upon attitudes and values are discussed. A 31-item bibliography and appendices of research material are included. (Author)

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*Effects of University Subcultures
on Student Attitudes*

by

DONALD L. THISTLETHWAITE

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July, 1972

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Abstract

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Donald L. Thistlethwaite

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This study sought to probe the contention that curricular specialization in higher education produces a polarization between the scientific and humanistic cultures. Two randomly selected panels of men enrolled at 25 universities were identified from student directories, and followed by mail surveys during three successive summers. Results were analyzed for 1,858 men who responded to all three surveys. Panels were selected so that during the longitudinal study Panel A members received increasing exposures to chosen major fields of study, while Panel B members received steady (or diminishing) exposures to such major fields. In a quasi-experimental design, changes in student attitudes and in perceived characteristics of peers and teachers were related to temporal variations in the degree of exposure to major fields of study. Predictions concerning differential accentuation of initial major field differences were generally unconfirmed for the attitudes measures, thus failing to replicate the results previously reported by Feldman and Newcomb. Implications for interpreting the impacts of major fields of study upon attitudes and values are discussed.

Also, three extraordinary events--the Cambodian incursion, the Kent State shootings, and the Jackson State shootings--occurred mid-way in the course of the panel study. The obtained trend data indicate that these events produced a sharp peaking of reported war-related protests and demonstrations, as well as pervasive changes in student attitudes. Intra-individual differences in attitudes remained relatively stable during the interval in which these

events occurred. Most of the effects of these external events appeared relatively transient.

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The research reported herein was supported by
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PREFACE

The goal of this research project was to provide tests of hypotheses concerning the ecological and attitudinal effects of participating in the academic and student subcultures of diversified universities. Despite three decades of research on the impacts of higher educational environments upon students, hypotheses concerning these effects have yet to be subjected to searching probes. Recent advances in quasi-experimental designs and in statistical procedures for controlling errors of measurement now make it possible to devise more persuasive tests of such hypotheses.

This report is partly concerned with examining C. P. Snow's contention that curricular specialization in higher education contributes to a polarization between the scientific and humanistic cultures. As part of a three-year longitudinal study, two randomly selected panels of men enrolled at 25 universities were identified from student directories, and followed by surveys in successive summers. Changes in student attitudes and values, and in the perceived attitudes and values of teachers and peers were related to temporal variations in the degree of exposure to academic and student subcultures. By coincidence the Cambodian incursion and the Kent State and Jackson State shootings were juxtaposed between the first and third survey waves. Thus, the study provided not only the opportunity of examining some of the varied conditions under which attitudinal polarization or convergence occurs, but also that of studying the impact upon student attitudes of the episodes of May, 1970.

ACKNOWLEDGEMENTS

It is a pleasure to acknowledge the help of many persons who made this study possible. The author is deeply indebted to: the panel members, who responded so generously with their time and effort in completing the lengthy mail surveys; the university administrative officers who provided student directories; colleagues Andrew C. Porter and Julian C. Stanley, who provided helpful comments and advice; and new colleagues Sam G. McFarland, Ronald W. Rogers, Monte D. Smith, and A. Rodney Wellens, who served as research assistants on the project and helped in the analysis of results.

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CHAPTER I

INTRODUCTION

A major purpose of this study was to clarify some tantalizing findings described by Feldman and Newcomb (1969) as an "accentuation of initial major field differences." These authors reanalyzed the longitudinal data previously reported by Huntley (1965) on over a thousand college students at a northeastern college. When students were classified by their major field of study at graduation, groups having the highest mean freshman scores on a given scale of the Allport-Vernon-Lindzey Study of Values tended to exhibit the largest mean gain in scores on that scale over the college years. The rank-order correlation between mean freshman scores on aesthetic values and mean freshman-to-senior gains on these values was large and positive (+.78). Students graduating in arts and humanities had the highest initial average aesthetic values and showed the largest gains, while students graduating in engineering and industrial administration had the lowest initial average aesthetic values and showed the smallest gains. Similar patterns of increasing differentiation among major field groups were found on other scales of the Study of Values. These findings do not appear to be merely artifacts arising from a limited ceiling on the scales used to measure values. In fact, the well-known ceiling effects on psychological measures would tend to artificially depress the gains of those groups initially ranking highest, and thereby tend to produce a negative, rather than a positive, correlation between initial level and gain.

One plausible interpretation of such accentuation patterns is that they are attributable to the normative influences of one's major field of study. Feldman and Newcomb write:

....there is the common fact of peer-group and faculty influence. In many colleges one sees more of one's fellow-majors and has more in common with them than with other students, and one sees most of the faculty in one's own department. Thus students in a major field are likely to be subject to normative influences (p. 193-194).

Nonetheless, there remains considerable doubt about the significance of these findings. Huntley's (1965) data do not show the fate of groups remaining intact over the entire four years of college. Many of the students graduating as humanities majors, for example, entered college with the intent of becoming engineers, physicians, etc., but changed during college to the humanities. Thus, the effects extensively discussed by Feldman and Newcomb could represent a tendency of students who are initially high in a given value to be recruited into a major field of study containing students and teachers who tend to be high in that value. In short, the accentuation effects emphasized by Newcomb and Feldman cannot be attributed with confidence to the effects of exposure

to the major field of study. To be sure, Newcomb and Feldman were aware of this limitation in their analysis of Huntley's data; they write that such accentuation

....could be no more than a combination of the individual's characteristics that initially led him to choose his major, together with the relatively intensive and limited nature of his experiences therein (p. 193).

More recently, Feldman (1972) has even more explicitly acknowledged the cogency of a simple recruitment interpretation of the accentuation pattern. He writes:

Put more conditionally, the proposition would be that if students initially having certain characteristics choose fields in which these characteristics are prized and nurtured, accentuation is likely to occur (p. 232).

Clearly a confident interpretation of such patterns of change in the attitudes and values of students requires not only better controlled observations of intact groups, but also knowledge of the varied conditions under which varied patterns of change occur.

Different Patterns of Average Change

Let us suppose we can rule out differential recruitment to the major field during the period of observation as the cause of accentuation. Under these conditions what patterns of change might we expect as a result of exposure to different major fields of study? Figure 1 illustrates several possible patterns of change that may be observed in a longitudinal study. The accentuation of initial major field differences shown in Figure 1a is said by Feldman and Newcomb (1969) to reveal the most "nearly pure effects" of exposure to four hypothetical fields of study (A, B, C, and D). The pattern shown in Figure 1b may be considered a second type of accentuation resulting from two joint influences--those of the major field and those of the larger society or college-wide culture. Thus, in this second example it is assumed that the effects of exposure to varied fields of study during the given time interval is to produce increasing divergence of fields, while the overall effects of the larger societal influences are to elevate the scores of all subjects during the given interval. Finally, Figure 1c illustrates a minimization of initial major field differences. The latter pattern is interpreted as resulting from college-wide or larger societal influences which tend to obliterate, or at least to minimize, initial differences between major fields of study. Of course, the "drift" of all scores over the interval could be upward, rather than downward (as shown in Figure 1c), or there might be no drift in either direction. In any case, however, it seems difficult to attribute the converging pattern of minimization to the effects of increased exposure to varied major fields of study. The conceptual difficulty here may be based upon the implicit assumption that differential exposure to the major fields

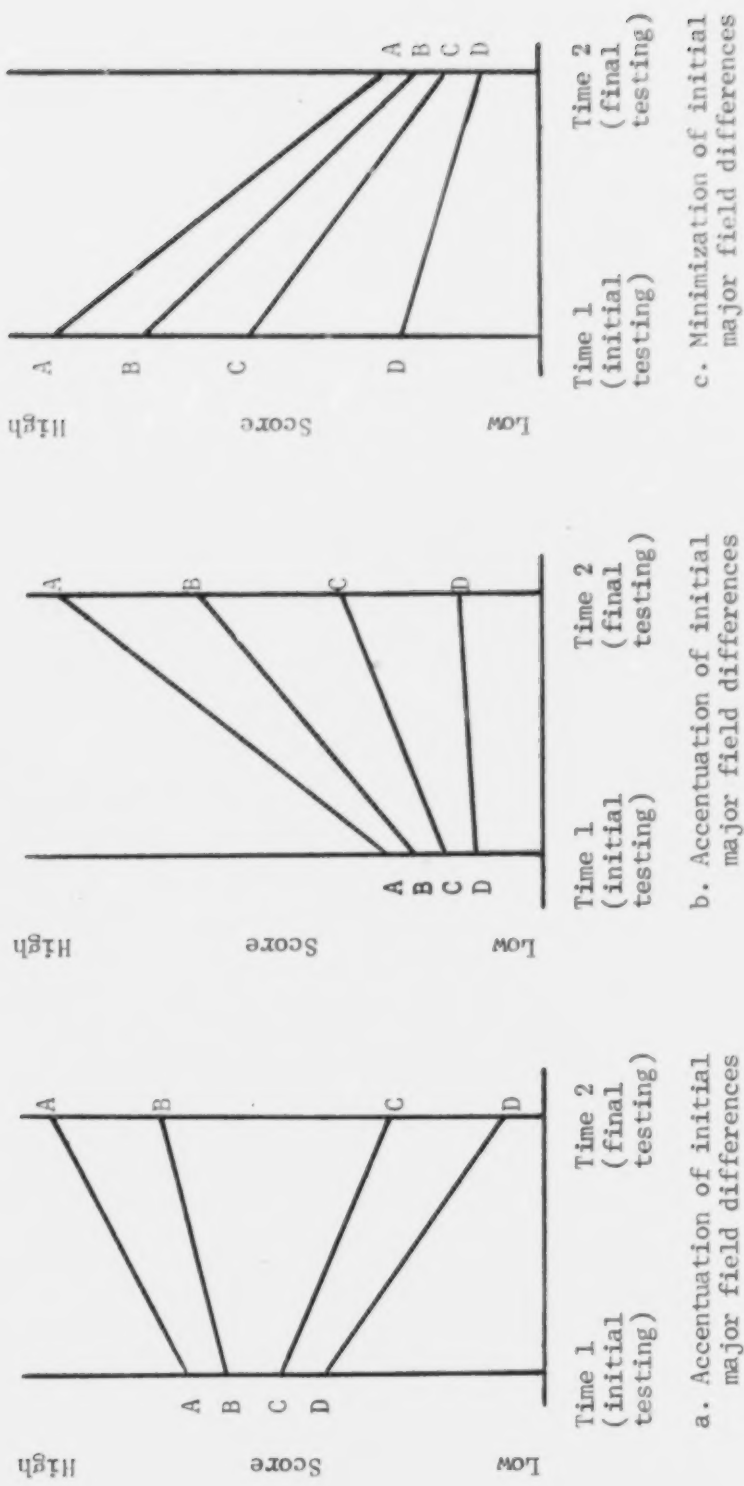


Figure 1. Patterns of Average Change by Students in Four Major Fields of Study
 (Adapted from Feldman and Newcomb, 1969)

was a cause of the initially observed differences. Thus, if the varied major fields do in fact have different effects, and if limited differential exposures to these fields prior to time 1 accounts for some of the initial differences observed, then we would expect that increased differential exposure to these fields would produce accentuation, rather than minimization, of the initial field differences. Finally, it may be pointed out that a pattern of "accentuation-minimization of initial major field differences" may occur under some circumstances. Specifically, such a pattern might be conceptualized as a joining of Figures 1b and 1c so that three testings are plotted along the abscissa with accentuation occurring between times 1 and 2 but with minimization occurring between times 2 and 3. Presumably, this latter pattern would be the outcome of major field influences being the major source of effects during the 1-2 interval, and of college-wide or societal influences (which tend to wash out initial field differences) being prepotent during the 2-3 interval. To clarify the conditions under which such varied effects might be more confidently predicted we must consider various time-series designs.

Time-Series Comparisons and Evidence of Impact

Campbell and Stanley (1963) have discussed both a single-group time-series design and a two-group multiple-time series experiment. These designs provide comparisons of several pre-experimental and several post-experimental measurements on one or more groups. The evidence of impact in these designs consists in the pre-experimental measures revealing a different pattern than the post-experimental measures; beyond this, the evidence of impact consists partly in confirmation of the expected timing of the observed change in measures. In such a quasi-experimental comparison, there is always the expectation that different treatments will have their maximal impacts during particular time intervals. More specifically, the effects of exposure to a given treatment should vary over time as a function of the degree of exposure to that treatment during the immediately preceding (inter-measurement) interval. Suppose we have a single experimental group (A) and a single control group (B) in a multiple time-series design, as shown in Figure 2. Imagine also that the former group alone is exposed during the interval between times 3 and 4 to an experimental treatment designed to produce elevated scores on a given scale. If we were to observe that the differentiation of the two groups markedly changed during the 3-4 interval, we would interpret this discontinuity as the probable effect of the introduction of our experimental treatment. The pattern of results shown in Figure 2 would suggest, moreover, that the effects of the treatment persisted over measurement occasions 5 and 6, although it is also possible to imagine cases in which effects are temporary and might be observable only on the measurement occasion immediately following exposure to the treatment.

In applying a similar logic to the present longitudinal study, we assumed that most undergraduate students in American universities pursue fairly widely distributed programs of study in the initial college

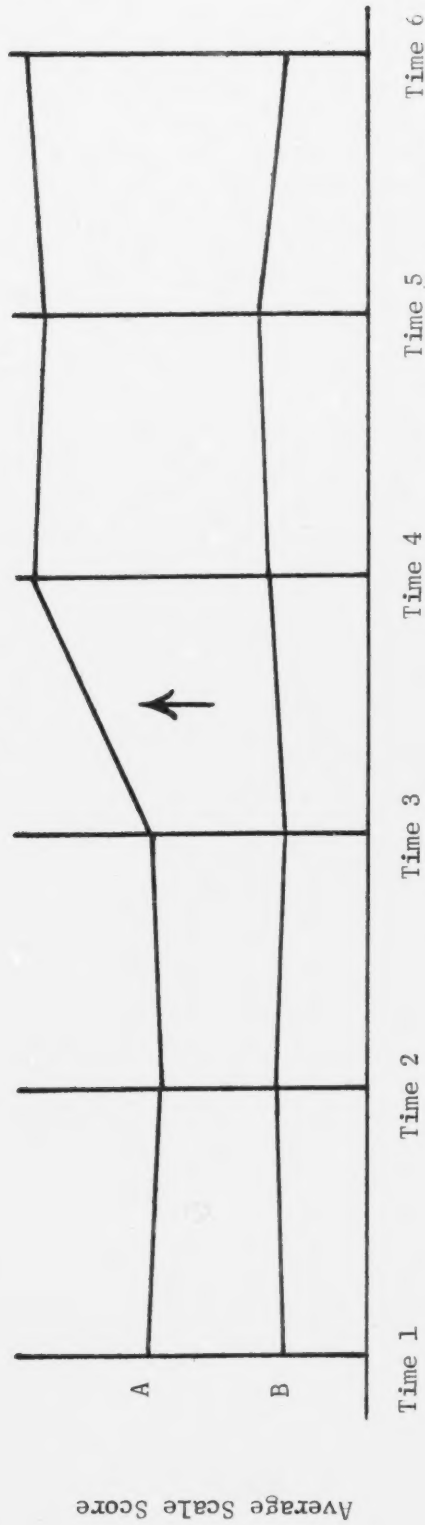


Figure 2. Hypothetical Effects Observable in a Multiple Time-Series Design (The arrow indicates that the experimental treatment was administered to Group A during the interval between times 3 and 4.)

years (particularly in the first year), and tend to specialize in their major fields primarily in the last two years. Such a curricular organization should result in low, moderate, and high exposure to one's major field of study during freshman, sophomore, and junior years, respectively; in contrast, the level of exposure to teachers and fellow-majors in one's major field should be at relatively high, but steady, levels during the junior and senior years of college, and should decline during the first post-graduate year (assuming that most graduates do not continue as graduate students in the field in which they majored as undergraduates). If these expectations concerning major field exposures are reasonably correct, and if exposures to varied major fields cause differential changes in a given value or attitude, then it seems plausible to expect the pattern of accentuation of initial major field differences for lowerclassmen (Panel A) and the pattern of minimization for upperclassmen (Panel B) on measures of that value or attitude. Figure 3 shows the different expectations for the two panels of students. Failure to confirm these differential expectations for two such panels of college students may be interpreted as a disconfirmation of the hypothesis that exposure to varied major fields of study affects the value or attitude in question.

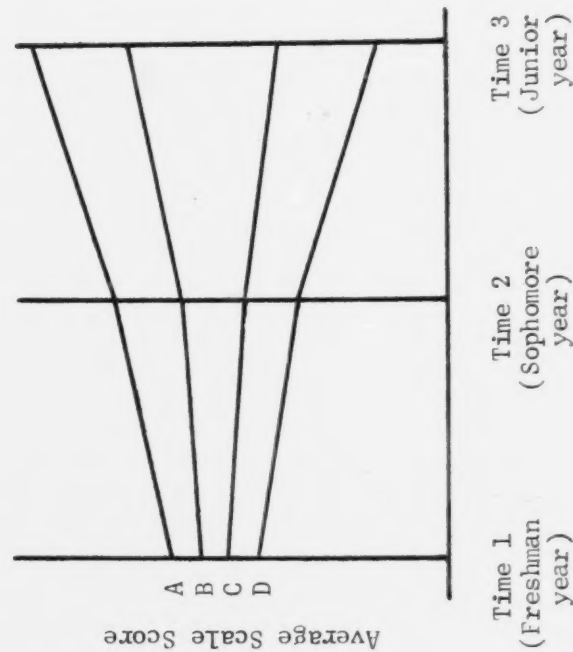
Marker Variables and the Interpretation of Time-Series Comparisons

Investigators in the field of factor analysis frequently use what are sometimes called marker variables. These are relatively pure factor tests, as determined by previous research. Such marker variables are often inserted in a test battery containing other tests having unknown properties in order to facilitate the interpretation of the new tests. An analogous use may be made of the concept of marker variables in interpreting the results of time-series experiments: the observed effects of experimental treatments upon marker variables should provide a standard which will facilitate the interpretation of observed effects upon other variables for which conceptual links to treatments are less adequately established.

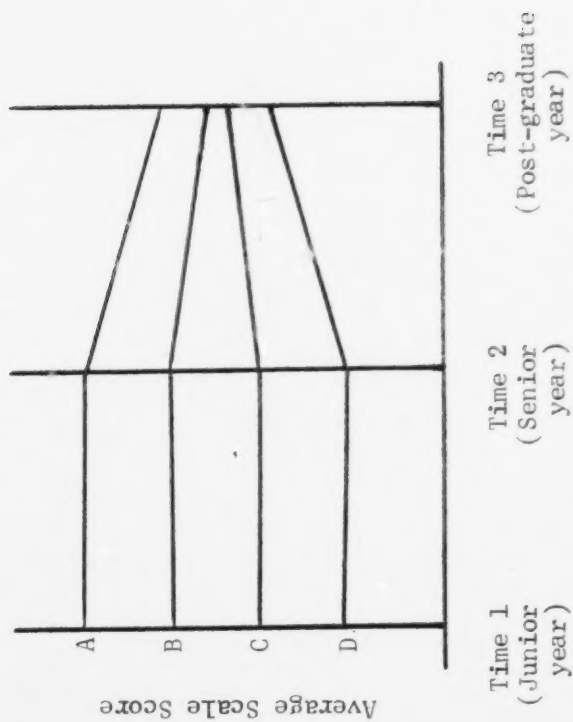
The marker variables of interest in the present application contain items which request the student to describe the faculty members they have known best during the preceding school year. These items are similar to those appearing in the environmental description inventories of Pace and Stern (1958) and of Pace (1963). For example, Pace (1964) asked students to indicate whether descriptive statements were characteristic of the environment (teachers and fellow students) in their major field of study. As might be expected, majors in the natural sciences reported exceptionally strong emphasis upon scientism, while majors in the humanities and fine arts reported strong emphasis upon humanism and estheticism.

Thistlethwaite (1969) has reported a longitudinal study in which intact major field groups were asked to periodically report their perceptions of their college peers and teachers (such descriptions will be referred to hereafter as reported college press). Students who had

Panel A (Lowerclassmen)



Panel B (Upperclassmen)



a. Accentuation of Initial Major Field Differences

b. Minimization of Initial Major Field Differences

Figure 3. Hypothetical Patterns of Average Change for Four Major Fields of Study

(Panel A members are assumed to experience increasing exposure to fields of study, A, B, C, or D, during the 1-3 time interval, while Panel B members are assumed to experience constant exposure to major fields during the 1-2 interval with decreasing exposure during the 2-3 interval.)

remained in a given field of study described during each of three successive summers (i.e., following the sophomore, junior, and senior years) the faculty members and student associates they had known best during the preceding college year. It was found that there was an increasing differentiation between students in different major fields with respect to reported college press as the students progressed through college. The classification by major field of study typically accounted for a greater proportion of the variance in press scale scores on later surveys than on the initial survey. For example, the classification into 14 major fields of study accounted for only 14 percent of the variance of initial scores on the scale, Faculty Press for Science, while the major field classification accounted for 19 and 25 percent of the variance on the second and third surveys, respectively. Similarly, on the Faculty Press for Humanities scale the classification by major field groups accounted for 13, 19, and 18 percent of the variance of scores on the first, second, and third surveys, respectively. Moreover, it is apparent from the means for the major fields that these findings illustrate the pattern of change described by Feldman and Newcomb as accentuation of initial major field differences. There is some evidence, then, that accentuation of initial college press differences has been observed under conditions which permit us to rule out differential group recruitment during the study as the causal explanation.

To be sure, these results seem to reflect little more than highly predictable changes in the ecology of students as they progress through college. Nonetheless, the incorporation of these two scales as marker variables in a time-series design similar to that illustrated in Figure 3 should permit a much more confident interpretation of the degree to which the design is sensitive in detecting highly predictable, ecological effects.

The Present Study

The study to be described in this report was designed to provide tests of hypotheses concerning the ecological and attitudinal effects of student participation in the academic and student subcultures of relatively large, diversified American universities. The earlier literature suggests that the impact of major fields of study may be attenuated in relatively small liberal arts colleges having distinctive college-wide atmospheres. Newcomb (1943) concluded from his study of women at Bennington College that "attitude change was only slightly related to courses of study pursued in college" (p. 148). Similarly, Freedman (1961) reports that changes shown by Vassar undergraduates on seven personality dimensions (social maturity, impulse expression, developmental status, dominance and confidence, repression and suppression, social integration, and masculine role) showed significant curricular differences only with respect to repression and suppression. Bereiter and Freedman (1962) comment that these findings "can be taken to show precious little effect from major field of study." However, these authors as well as others (Eddy, 1959; Feldman and Newcomb, 1969; Feldman, 1972) note that the small, tightly-knit liberal arts college

may be an institution in which the college-wide impact of the setting overwhelms distinctive major field effects, and that major field impacts may well be greater in larger, more diversified institutions.

Briefly, then, the present study sought to sample college students enrolled at large public and private universities. Two large, randomly selected panels of college men enrolled at 25 universities were identified from student directories, and followed by mail surveys for three successive summers. One panel was identified at the completion of the freshman year, and the other at the completion of the junior year. Changes in student attitudes and values, and in the perceived demands of teachers and peers were related to temporal variations in the degree of exposure to academic and student subcultures.

To summarize, there are several circumstances which suggest that the present study may permit a more confident interpretation of the accentuation pattern of change described by Newcomb and Feldman. First, to rule out differential recruitment during the study as the explanation of such a pattern it is desirable to deal with intact groups of students who remain within given fields of study throughout a sequence of measurements. In contrast to the practice of Huntley (1965) of defining major field groups solely on the basis of major field at the time of graduation, we shall be concerned with students who start and remain within a given field during the interval between an initial and a subsequent measurement occasion. Second, since the impact of the larger societal or campus-wide cultures may compete with, or mask, major-field influences (as suggested in Figure 2) it is desirable to obtain evidence of the nature of these larger societal influences. As it turned out, at least three external events, of massive import, occurred just before the middle wave of measurements on our panels of college students: the Cambodian incursion, the Kent State shootings, and the Jackson State shootings. These external events had fairly predictable influence on some of the measured attitudes of a sizeable proportion of the panel members in this study, and it was possible to observe whether the accentuation pattern was observed on the measurement scales which appeared particularly sensitive to these external events. Third, it is desirable to design one's observations so that at least two aggregates of college students are identified for whom the course of exposure to major fields varies over time. The present study achieved at least a partial realization of a multiple time-series design (as illustrated in Figure 3) by selecting panels of lowerclassmen and upperclassmen for study. It was also possible to obtain evidence which permitted verification of the assumption that degree of exposure to the major field did indeed vary differentially over time for these two panels.

Finally, it is highly desirable that a longitudinal study of this type incorporate scales which are sensitive to highly predictable changes in the ecology of students as they progress through college. In this study, it was expected that lowerclassmen would exhibit a clear-cut accentuation pattern on marker variables descriptive of the emphases of

teachers, whereas upperclassmen were not expected to show evidence of such accentuation. If such differential accentuation is not obtained on these marker variables then it can be argued that there is little or no basis for expecting the design to reveal major field effects upon the attitudes and values of college students. On the other hand, if the design does indeed reveal the expected effects on the selected marker variables then we may have added confidence in the appropriateness of the design as a probe of the normative attitudinal effects of exposure to major fields of study.

Organization of this Report

In the next chapter the procedures used in identifying panels of lowerclassmen and upperclassmen and in designing and evaluating the multi-item scales for probing the attitudes and college press of panel members are described. Chapter Three describes the results of analyses probing the hypothesized effects upon perceived college press and attitudes of increased exposure to major fields of study. Chapter Four discusses the changes in the panels observable over the three survey waves, and relates the overall trends to selected external events (particularly those associated with the aftermath of Cambodia and Kent State). Finally, the last chapter summarizes the principal findings and attempts to interpret the accentuation and minimization patterns of change shown by panel members.

CHAPTER II

PROCEDURES

Chapter I indicated that the plan of this study was to conduct a longitudinal study of students attending large, diversified universities, and to periodically obtain measures of attitudes and of perceptions of peers and teachers. This chapter describes procedures in collecting the survey data.

Selection of Universities

As we have seen, several investigators have attributed previous failures to find impressive evidence of the impact of major fields of study to the practice of following students in small, liberal-arts colleges, where the major field influences may be less potent than the college-wide influences. To insure the presence of vigorous departments representative of a variety of major fields of study, it was decided to sample only institutions classified as universities and having total opening enrollments of at least 5,000 students. As shown in the upper half of Table 1, there were only 161 institutions (48 privately controlled, and 113 publicly controlled) meeting this requirement with respect to their Fall, 1968 enrollments. In selecting institutions from this group preference was given to those whose student bodies were thought to be predominantly residential, since it was assumed that commuters tend to participate less fully in university subcultures than residential students.

In Spring, 1969, the administrative officers of 77 of these 161 institutions were requested to provide the investigator with a copy of the school's 1968-69 student directory (provided it contained the student's name, class standing, and home address). Responses were received from 56 university administrators (73 percent): 15 replied that their university had not published a directory of the type required (though several of these offered to draw special, random samples of students from University files); 39 sent copies of their student directories, and 30 of these directories did indeed contain all the required information. The lower half of Table 1 summarizes the characteristics of the 25 institutions selected for study, and indicates that the sample is highly similar to the larger group of 161 institutions both with respect to geographical region and type of control. The 25 participating universities were as follows:

Northeast: Delaware, University of
 Fordham University
 Johns Hopkins University
 Pittsburgh, University of
 Rensselaer Polytechnic Institute
 Rutgers, The State University
 State University of N.Y. at Albany
 Syracuse University

Midwest: Illinois, University of
 Kansas, University of
 Michigan State University
 North Dakota, University of
 Northwestern University
 Ohio University
 Wisconsin, University of

South: Arizona, University of
 Louisiana State University
 Mississippi, University of
 Oklahoma, University of
 Southern Methodist University
 Virginia, University of

Far West: California, University of (Santa Barbara)
 Colorado, University of
 Oregon, University of
 Stanford University

Selection of Students

It is known that men and women tend to differ with respect to choice of major field of study in college. If the study had undertaken to include both men and women, it would therefore have been necessary to perform parallel but separate analyses by sex, thus doubling the magnitude of the project. Unfortunately, a study of this scope did not appear feasible. Since it was thought that men tend to distribute themselves more evenly among a larger number of major fields of study, the study was designed to sample only male students at the 25 selected universities.

From each student directory two random samples of 155 names each were drawn: the first group (Panel A) included those listed as having freshman standing, and the second (Panel B) included those listed as having junior standing, during the 1968-69 academic year. Thus a total of 310 male students were selected from each of the 25 universities, resulting in a designated sample of 7,750 students for the initial survey.

The Mail Surveys

The three primary mail surveys were sent to the home addresses of the members of Panels A and B during the summers of 1969, 1970, and 1971. To simplify the analysis, the designated sample for a later survey included only those panel members who had returned a completed, and useable, survey questionnaire to the previous year's survey. The questionnaires of students who reported they had withdrawn from college for more than a semester prior to their normal graduation date were considered unuseable; however, students who transferred to a new college or university during the course of the study were retained so long as they remained largely in progression with their class. Of course, this procedure insured that the two panel groups remained differentiated with respect to class standing: as expected, the final mail survey was completed

Table 1

Comparison of the Selected Universities and the Larger Population
of Available Universities

Population or sample	Geog. Region	Numbers of Institutions		Percentages of Institutions		Prop. in each region
		Private Control	Public Control	Private Control	Public Control	
Population of universities ^a	Northeast	23	22	14.3	13.7	28.0
	Midwest	13	38	8.1	23.6	31.7
	South	8	33	5.0	20.5	25.5
	Far West	4	20	2.5	12.4	14.9
Totals		48	113	29.9	70.2	100.1
25 selected universities whose students were sampled	Northeast	4	4	16.0	16.0	32.0
	Midwest	1	6	4.0	24.0	28.0
	South	1	5	4.0	20.0	24.0
	Far West	1	3	4.0	12.0	16.0
Totals		7	18	28.0	72.0	100.0

^aIncludes only those universities with total opening enrollments of 5,000 or more in Fall, 1968. Source: United States Office of Education. Opening Fall Enrollment in Higher Education: Institutional Data, 1968. Washington: U.S. Government Printing Office, 1969.

after most members of Panel A had just completed the junior year of college, and after most members of Panel B had completed the first post-baccalaureate year in a new occupational or educational setting.

Since it was desirable to obtain reliability estimates for each of the scale scores derivable from the first data wave, a small group of men at each university was requested to complete the initial survey questionnaire twice. Of the 250 students selected in this special reliability mailing (10 from each institution and half of these from each panel), 152 returned the second, completed (initial) questionnaire within four weeks of the first response. Data from the latter students were used to estimate the one-month test-retest stability of scale scores, and are discussed below in Table 6.

In addition, each year's primary survey was followed after approximately four to five weeks with a follow-up, "reminder" mailing to each panel member who had not yet responded. Thus, during survey waves two and three follow-up mailings were sent to each panel member who had not responded within four weeks after the primary mailing. However, in collecting data for wave one it appeared that an expenditure ceiling might be required, and the follow-up mailing was sent only to a randomly selected half of early non-respondents. An analysis of returns on the first data wave indicated that the follow-up mailing was effective in increasing the eventual response by approximately 13 percent (among students receiving and not receiving the follow-up on the initial wave, 43 percent and 30 percent, respectively, ultimately returned useable responses).

Response Rates to Surveys

Table 2 summarizes the returns to the three primary mail surveys (including their respective follow-ups). It can be seen that the principal loss of respondents occurred on wave one (1969), when approximately 60 percent of the initial sample of 7,750 students failed to reply. Separate analyses indicate that on this occasion the response rate was better from students enrolled at privately controlled institutions (private control, 40.5 percent; public control, 34.7 percent). Also, responses were best from students in the Northeast region and poorest from those in the South (Northeast, 40.7 percent; Far West, 37.3 percent; Midwest, 34.9 percent; South, 31.4 percent).

It will be recalled that the 1970 and 1971 surveys were sent only to respondents to the preceding wave, and it was anticipated that once a student had committed himself to the project by responding to the initial survey he would tend to respond to future mailings. As expected, the response rates to later surveys were considerably better. On waves two and three, overall response rates of 77.5 percent and 85.3 percent, respectively, were obtained.

An additional characteristic of the returns, not apparent in Table 2, is that lowerclassmen (Panel A) exhibited a higher response rate than

Table 2
Returns to Surveys in 1969, 1970, and 1971

Response status	Survey					
	1969		1970		1971	
	N	%	N	%	N	%
A. Respondent returning <u>useable</u> questionnaire	2,812	36.3	2,179	77.5	1,858	85.3
B. Respondent returning <u>unuseable</u> questionnaire (e.g., withdrew from college before June 1970, returned questionnaire late or incomplete, etc.)	217	2.8	73	2.6	74	3.4
C. <u>Untraceable</u> or <u>deceased</u> (questionnaire returned with no forwarding address, etc.)	112	1.4	24	.9	14	.6
D. Non-respondent	4,609	59.5	536	19.1	233	10.7
Totals	7,750	100.0	2,812	100.1	2,179	100.0

upperclassmen (Panel B). Although the designated sample for each panel included 3,875 students the final returns from the 1,858 respondents on wave three included 1,036 Panel A members (26.7 percent survival) but only 822 Panel B members (21.2 percent survival).

Representativeness of Surviving Panel Members

The nature of the response biases introduced by the sizeable subject loss on wave one must be estimated indirectly, since the characteristics of nonrespondents to this wave remain unknown. If it is assumed that nonrespondents to waves two and three were similar to nonrespondents to wave one, then estimates of the probable direction of response biases may be made by comparing surviving and nonsurviving panel members. The former include those 1,858 panel members who remained in the study throughout wave three; the latter include the 954 panel members who initially responded but who did not remain in the study for one reason or another (the number of nonsurvivors may be derived from Table 2 by subtracting 1,858 from 2,812). The group of nonsurvivors includes some students who withdrew from college and thereby became ineligible, some who were untraceable or deceased, but most (81 percent) were presumably nonrespondents who chose not to continue their participation in later surveys.

Table 3 compares survivors and nonsurvivors with respect to major field of study reported on wave one. This table shows that a greater percentage of the survivors initially declared engineering as their major field of study, and a greater percentage of the nonsurvivors initially declared fine arts or humanities as their major field of study. As will be shown in later sections of this report, these differences may be interpreted as indicating that surviving panel members tended to be somewhat more conservative in attitudes than nonsurviving panel members.

The attitudes of survivors and of nonsurvivors towards campus demonstrations are summarized in Table 4. These results suggest that the response biases of surviving panel members may be relatively small in magnitude. For example, the percentages of these two groups expressing either strong or conditional approval of the most memorable demonstration on the student's campus (during the 1968-69 academic year) were the same--54.7 percent. A more sizeable difference was found in the reported degree of participation in protest demonstrations: 23.1 percent of the nonsurvivors, but only 15.5 percent of the survivors, reported they were "very active" or "moderately active" in such demonstrations.

Finally, in order to further characterize the panel members, Table 5 summarizes data concerning the racial, religious, and political party affiliations reported on wave two by each of the surviving panel groups. Since the affiliations of the student populations at the 25 universities are not known, these data are not immediately useful in assessing response biases of the respondents. It may be seen in Table 5 that the two panels differed most with respect to political party affiliation (a greater proportion of upperclassmen reported an affiliation with the Democratic Party). This difference is most likely related to the tendency of

Table 3

Major Fields of Study as Reported in 1969
by Surviving and Non-surviving Panel Members^a

Broad major field of study ^b (Summer, 1969)	Percentages		Diff.
	Survivors (N= 1,858)	Non- survivors (N= 954)	
Biological Sciences	8.8	8.2	.6
Business	11.8	13.8	-2.0
Engineering	19.6	13.5	6.1
Fine arts or humanities	15.6	19.8	-4.2
Mathematics or statistics	4.7	4.3	.4
Physical Sciences	6.8	5.7	1.1
Psychology	5.8	7.0	-1.2
Social Sciences	13.0	11.6	1.4
Misc. fields	13.8	16.0	-2.2
Totals	99.9	99.9	

^a Survivors are the respondents shown in Table 2 returning useable questionnaires to all three surveys, while nonsurvivors are the respondents returning useable questionnaires to only the 1969 survey.

^b The broad major fields of study refers to the underlined major field categories shown in each survey questionnaire (cf. Appendix C); the broad field includes each specific field tested under the underlined category on these questionnaires (e.g., "Physical Sciences" includes Chemistry, Physics, and "other physical sciences").

Table 4

Attitudes Towards Campus Demonstrations as Reported in 1969
by Surviving and Non-Surviving Panel Members

Question and response in Summer, 1969	Percentages		Diff.
	Survivors (N= 1,858)	Non- survivors (N= 954)	
How would you characterize your attitude toward the most memorable demonstration on your campus last year?			
Strongly approved	18.6	21.7	-3.1
Approved with reservations	36.1	33.0	3.1
Can't decide	3.7	4.4	- .7
Disapprove with reservations	21.1	19.8	1.3
Strongly disapprove	14.0	13.4	.6
No response	6.5	7.7	-1.2
Totals	100.0	100.0	
During the past year have you been active in civil rights, political and social action, or other demonstrations?			
Yes, very active	1.6	4.0	-2.4
Yes, moderately active	13.9	19.1	-5.2
No, only nominally	39.3	33.5	5.8
No, I haven't been involved at all	45.0	43.3	1.7
No response	.3	.1	.2
Totals	100.1	100.0	

Table 5

Ethnic, Religious, and Political Party Affiliations
Reported by Lowerclassmen and Upperclassmen
in Summer, 1970

Type of affiliation reported	Percentage reporting given attribute	
	Panel A (N= 1,036)	Panel B (N= 822)
Racial:		
Black	.6	.5
Oriental	.5	1.0
White	97.6	96.7
No response	1.4	1.8
	<u>100.1</u>	<u>100.0</u>
Religious:		
Catholic	24.3	22.5
Jew	9.5	7.2
Protestant	38.7	42.9
Other philosophical or non- Western groups (buddhism, etc.)	2.1	1.6
None or no response	25.5	25.8
	<u>100.1</u>	<u>100.0</u>
Political:		
American Independent (G. Wallace and other con- servative groups)	.4	.4
Republican	22.0	25.4
Democratic	33.4	41.1
Liberal, Independent (and other liberal groups)	11.7	11.2
None or undecided	32.6	21.8
	<u>100.1</u>	<u>99.9</u>

college students to exhibit more liberal attitudes as they progressed through college (the latter trend is discussed more fully in a later chapter).

In sum, it cannot be claimed that the panel members who responded to all three of the successive mail surveys were fully representative of the male freshmen and juniors at the selected universities. There is evidence that the panel members who survived all three waves differed both with respect to major field of study and degree of participation in protest demonstrations, from students who initially responded but later declined to participate further in the study. Nevertheless, the validity of the time-series comparisons described in Chapter I did not depend upon the student panel members being representative of the populations from which they were drawn. To be sure, the response biases reduce somewhat the generalizability of the results; however, they do not vitiate the analyses of subcultural effects which were of primary interest.

Description of Press and Attitude Scales

It can be seen in Appendix C that the questionnaires used in the three successive mail surveys differed with respect to several of the initial items, though a large proportion of the items remained fixed from one wave to the next. The fixed portion of the survey battery included 33 multi-item scales: 6 faculty press scales, 11 student press scales, and 16 attitude scales. In order to partially control response biases, half of the items in a scale were typically keyed so that an "Agree" response was weighted more heavily, and the remaining half of the items were keyed so that a "Disagree" response was weighted more heavily. Also for most scales, items from different scales were presented in a scrambled order; presumably this format made it less apparent what scale dimensions the items were designed to assess. Citations of previous studies using these scales will be limited to one or two references, and are not intended to be exhaustive.

Faculty Press Scales. Each of the six scales used to obtain descriptions of teachers has been discussed by Thistlethwaite (1969). Instructions for items in these scales read, in part, as follows:

Think only of the teachers with whom you have had most of your courses or have known best during the past year.

Students were then asked to use a five-point rating scale to express their degree of agreement with statements describing these faculty members. The items making up each of the six faculty press scales are listed in scales 1 through 6 in Appendix A. For each item coded "T" in this appendix the greater the degree of agreement expressed with the statement the greater was the score on that item; for each item coded "F" the greater the degree of disagreement expressed with the statement the greater was the item score (e.g., a respondent circling a response category of 1, 2, 3, 4, or 5 on an item coded "F" received an item score

of 5, 4, 3, 2, or 1, respectively). Item scores for the six items in a given faculty press scale were then summed to yield a total score for that scale.

Items in a given scale are listed in Appendix A in order of their representativeness, where the latter attribute was indexed by the correlation between the item score and the total scale score. The titles of the six scales, together with the most representative item in each cluster, are as follows:

- (1) Science. It was obvious they believed the American college has over-emphasized education in the sciences. (F)
- (2) Advanced Training. They tried to persuade qualified students to seek advanced training in their field of study. (T)
- (3) Vocationalism. Very few of their courses were aimed at preparing the student for his vocation. (F)
- (4) Humanities. They tried to get students interested in the humanities. (T)
- (5) Supportiveness. Their counseling and guidance were really personal, patient, and extensive. (T)
- (6) Affiliation. They took a personal interest in me and my work. (T)

Student Press Scales. Instructions for completing the items describing student colleagues read, in part, as follows:

Describe only those students you knew best and associated with most commonly during the past year. They may be students in your major field, living quarters, or other campus groups.

Student responses to the five-point rating scale were obtained and scored in a manner analogous to that already described for the faculty press scales.

Items in each of the 11 student press scales are listed in scales 7 through 17 in Appendix A. It can be seen that these scales were also constructed by using equal numbers of pro (direct-worded) and con (reverse-worded) statements, and that items for a given scale were scrambled among those of other scales to partially disguise the specific dimensions of interest. Eight of these student press scales have previously been discussed by Thistlethwaite (1969); the remaining three (scales 11, 15, and 17) were constructed for this study. The titles of the student press scales, together with the most representative item in each, are as follows (as before, high item scores were assigned to

agreement with "T" items and to disagreement with "F" items):

- (7) Estheticism. They seemed to have little appreciation for the fine or applied arts. (F)
- (8) Opposition to Faculty Influence. Most of them felt their teachers had helped them to achieve greater direction, force, and clarity. (F)
- (9) Playfulness. Their parties were frequent and a lot of fun. (T)
- (10) Reflectiveness. Long, serious philosophical discussion were common among them. (T)
- (11) Political Participation. During the last year they took on a heavy load of active political work in support of their issues and candidates. (T)
- (12) Vocationalism. Most of them believed that the main goal of a college education is to prepare the student for his vocational career. (T)
- (13) Affluence. They were accustomed to having plenty of money. (T)
- (14) Science. Most of them were planning careers in science. (T)
- (15) Prosocial Concern. They felt that students should be actively engaged in solving social problems. (T)
- (16) Advanced Training. Most of my friends were planning to enter careers which required graduate or professional degrees. (T)
- (17) Student Power. Mostly they felt that demonstrations to demand greater student power had no place on a college campus. (F)

Attitude Scales. Four of the 16 attitude scales were constructed for this study. The titles of these, together with the single most representative item from each, are as follows:

- (18) Practical Orientation. An essential function of education is to prepare students for practical achievement and financial reward. (T)
- (19) Science Orientation. From the standpoint of a career field, I am more interested in the humanities than in the sciences. (F)

(21) Esthetic Orientation. I enjoy talking about music, theater, and other art forms with people who are interested in them. (T)

(24) Prosocial Orientation. I plan to be active in the cause of eliminating poverty and ghettos. (T)

Additional items included in each of these scales are enumerated in Appendix A; each of these scales was perfectly counterbalanced by the inclusion of equal numbers of pro and con statements, and was scored in a manner similar to the scales already described. These new scales appear similar in content to comparable (but longer) scales developed by other investigators (e.g., the Practical Outlook, Estheticism, and Thinking Orientation Scales of the Omnibus Personality Inventory, or the Scientism Scale of Stern's Activities Index). While the length of the latter scales precluded their use in the present project, it is expected that these scales will correlate substantially with their counterparts among the new scales. In any case, the factor analyses and major field differences described later in this report establish the construct validity of these new scales.

A second group of attitude scales consisted of eight scales developed by previous investigators and used with little or no editing of items (though scoring keys were generally modified). An obvious advantage of using standardized attitude scales is that comparisons between the studies of different investigators are facilitated. On the other hand, such scales may introduce disadvantages: such scales may be vulnerable to response biases because pro and con statements are not equally represented, or the items themselves may be dated and invite misinterpretation by a younger generation of respondents. (The Conservatism Scale described below elicited an unusually large number of critical comments from students, and no doubt requires extensive modification for use with current classes of college students.) Seven of these eight scales have been discussed by Robinson, Rusk, and Head (1968). The following enumeration indicates the primary sources of the scales, and indicates the nature of the editorial revisions or scoring changes introduced:

(20) Free Speech. This scale is an adaptation of McClosky's (1964) Free Speech and Opinion Scale. Agree-disagree responses were modified to include a five-point Likert-type response format and scoring key.

(22) Domestic Social Welfare. This scale is identical in content to one given by Campbell, Converse, Miller, and Stokes (1960, pp. 194-208). The dichotomized format used in deriving a Guttman scale was abandoned and replaced with a Likert-type scoring.

(23) Pacifism. This cluster corresponds to Putney's (1962) Pacifism Scale; however, one item which Putney found to elicit an extremely low percentage of agreement was omitted, resulting in an equal

representation of pro and con statements. The Guttman-type scoring key was replaced with a Likert-type scoring key.

(25) Internationalism. This scale is identical to one described by Campbell, et al. (1960, pp. 194-208). The scoring key was modified to represent a Likert-type summative index.

(26) Anomia. This scale corresponds to Srole's (1956) Anomia Scale. A Likert-type response format and scoring scheme were introduced.

(27) Conservatism. The items of this scale are identical to those in the Selznick and Steinberg (1966) scale on Ideological Agreement with Goldwater. The dichotomous scoring key used by these authors was replaced with the scoring key shown in Appendix A.

(28) Civil Rights. These items were adaptations of items appearing in the 1964 election study of the Survey Research Center at the University of Michigan and summarized by Robinson, et al. (1968, pp. 545-551). The scale included items assessing attitudes towards busing to achieve racial integration in schools, equal opportunity in jobs, residential integration, and integrated public accommodations. The scoring keys were modified to correspond to the key shown in Appendix A.

(29) Political Activity Index. This cluster corresponds to the Political Activity Index of Woodward and Roper (1950); however one item concerning frequency of voting was omitted. The scoring key was also modified to provide a greater range of scores.

Finally, a third group of attitude scales was derived from student ratings of a list of requirements for a "satisfying job or career", previously described by Goldsen, Rosenberg, Williams, and Suchman (1960). The first requirement in this list ("provide me with an opportunity to use my special abilities and aptitudes") was eliminated since it elicited almost unanimously high ratings of importance. The remaining 12 requirements were clustered into four separate scales on the basis of manifest content, and the importance ratings coded 1, 2, 3, and 4 on the survey questionnaire (Appendix C) were scored 4, 3, 2, and 1, respectively. The following enumeration of the four scales includes the most representative job requirement in each scale (as determined by item vs. total scale score correlations):

(30) Prosocial Job Orientation. Give me an opportunity to be helpful to others.

(31) Affluent Job Orientation. Provide me with a chance to earn a good deal of money.

(32) Intellectual Job Orientation. Give me an opportunity to live and work in the world of ideas.

(33) Individualistic Job Orientation. Provide me with adventure.

Homogeneity and Stability Indices

A homogeneous cluster of items may be regarded as one which, if randomly divided in half and scored as two half tests, would yield scores on the half tests which have a high, positive correlation with each other. In other words, a homogeneous cluster of items is made up of items which tend to assess the same characteristics of subjects. Other things being equal, a relatively high degree of homogeneity is desirable in a scale, mainly because under this condition we have greater confidence in being able to characterize the trait assessed by such a scale. Table 6 summarizes Kuder-Richardson Formula 20 estimates of the homogeneities of the 33 scales. It can be seen that these indices ranged from a low of .45 (Individualistic Job Orientation) to a high of .86 (Civil Rights), with a median value of .74.

Analyses to be described in Chapter III required reliability estimates for each of the initial scale scores. One-month test-retest correlation coefficients were estimated for this purpose, and are shown in Table 6. The reliability estimates ranged from .69 (Scale 30, Prosocial Job Orientation) to .94 (Scale 28, Civil Rights), with a median value of .81. There appears to be no difference in the average reliabilities of the press and attitude scales: the median reliability coefficients for the 17 press scales and for the 16 attitude scales were each .81.

It is also of interest to note that most of the attitude and press scale scores were moderately stable even over intervals of one and two years. Two-year stability coefficients for the press scale scores of members of Panel B were not available (these students were reporting on their first post-baccalaureate year in 1971, and therefore were not asked to complete press scales on that occasion). Nonetheless, stability coefficients were available for Panel A over the two-year interval: for this panel, the median stability coefficients for the 33 scales were .56 and .48, for the one-year and two-year intervals, respectively. It may also be noted in Table 6 that the scale scores of upperclassmen tended to be slightly more stable than those of lowerclassmen: the median stability coefficients of the 33 scales for Panels B and A over the one-year interval, were .63 and .56, respectively.

Factor Structure of Scales

Several factor analyses were undertaken to examine the construct validity of scales included in the battery. Three principal axes factor analyses were performed on scale intercorrelations based upon data from responses to wave one: the first was based upon a 20 percent random sample of all respondents on this occasion; the second was based only on Panel A respondents; and the third was based only on Panel B respondents. The results of the three analyses were very similar: the first five factors (accounting for the largest proportion of variance in each separate analysis) were virtually identical. For simplicity, only the analysis based upon Panel B data will be discussed.

Table 6

Indices of Homogeneity and Stability of College Press
and Attitude Scales

College Press Scale	Homo- geneity ^a	One- month stability ^b	Stability over survey waves ^c			
			One-year interval		Two-year interval	
			A	B	A	B
Faculty Press Scales						
1. Science	.59	.73	.51	.61	.47	--
2. Advanced training	.66	.82	.43	.50	.36	--
3. Vocationalism	.74	.80	.45	.60	.42	--
4. Humanities	.78	.81	.56	.68	.48	--
5. Supportiveness	.75	.80	.50	.48	.37	--
6. Affiliation	.81	.86	.48	.50	.38	--
Student Press Scales						
7. Estheticism	.84	.86	.62	.69	.58	--
8. Opp. to Fac. Infl.	.74	.86	.47	.49	.37	--
9. Playfulness	.66	.79	.58	.63	.48	--
10. Reflectiveness	.81	.85	.54	.65	.49	--
11. Political Particip.	.72	.74	.43	.50	.36	--
12. Vocationalism	.62	.78	.56	.65	.47	--
13. Affluence	.65	.83	.55	.64	.44	--
14. Science	.84	.88	.61	.71	.56	--
15. Prosocial Concern	.63	.77	.48	.59	.42	--
16. Advanced Training	.79	.79	.44	.52	.42	--
17. Student Power	.83	.83	.56	.59	.46	--
Attitude Scales						
18. Practical Orient.	.59	.81	.67	.73	.59	.66
19. Science Orientation	.84	.92	.83	.84	.77	.80
20. Free Speech	.77	.76	.58	.65	.48	.60
21. Esthetic Orient.	.83	.88	.81	.83	.76	.80
22. Domestic Soc. Welfare	.45	.71	.49	.62	.44	.58
23. Pacifism	.84	.93	.74	.76	.67	.70
24. Prosocial Orient.	.69	.88	.69	.68	.63	.62
25. Internationalism	.53	.81	.52	.52	.47	.51
26. Anomia	.74	.75	.58	.62	.52	.58
27. Conservatism	.54	.75	.55	.63	.54	.57
28. Civil Rights	.86	.94	.70	.76	.64	.71
29. Political Activity	.68	.86	.66	.71	.64	.68

Table 6 --Continued

College Press Scale	Homo- geneity ^a	One- month stability ^b	Stability over survey waves ^c			
			One-year interval		Two-year interval	
			A	B	A	B
Attitude Scales						
30. Prosocial Job Orient.	.61	.69	.58	.65	.53	.60
31. Affluent Job Orient.	.81	.85	.67	.70	.61	.64
32. Intellect. Job Orient.	.62	.76	.58	.62	.50	.57
33. Individ. Job Orient.	.45	.78	.53	.58	.47	.50

^aEstimated by Kuder-Richardson Formula 20 as extended by Ferguson (1951) for items with multiple response categories; based upon data from respondents described in footnote b.

^bTest-retest correlation coefficients based upon 152 respondents to wave one who completed a second initial questionnaire approximately four weeks after the first questionnaire.

^cTest-retest correlation coefficients for Panel A (N=1,036) and Panel B (N=822), correlating wave one vs. wave two (one-year interval) or wave one vs. wave three (two-year interval).

Table 7 lists the eight oblique factors extracted in order of the percentage of extracted common variance associated with each. A major concern was whether the four new attitude scales (Scales 18, 19, 21, and 24) would tend to cluster with other scales similar in conceptualization. It may be seen in Table 7 that the Science Orientation (19) and Esthetic Orientation (21) scales did indeed have their highest loadings on the Scientism (I) and Estheticism (V) factors, respectively.

The Practical Orientation (18) scale had its highest (negative) loading on the Estheticism factor. While it was anticipated that this scale might cluster with scales appearing in the Conventionalism (VII) cluster, it is not surprising to find it correlating negatively with the Esthetic Orientation scale (the scale intercorrelation was $-.48$) and for it to have the given loading on factor V.

Finally, the highest loading of the Prosocial Orientation scale (24) was on the Benevolence (VIII) factor. It may appear anomalous that this scale did not have its highest loading on the same factor in which the Prosocial Job Orientation (30) emerged. In fact, in the factor analyses for Panel A and for the pooled sample, these two scales (24 and 30) had their highest loadings on a single, common factor. However, it also seems reasonable that responses to questions about requirements for a "satisfying job or career", which appear to define the main content of the Gregariousness (VI) factor, may have a different significance for upperclassmen than for lowerclassmen. It may be that among lowerclassmen dispositions toward gregariousness and benevolence are relatively undifferentiated, while among upperclassmen these two orientations are more distinct. In any case, items most characteristic of the Gregariousness factor appear to express a preference for working with people, while items most characteristic of the Benevolence factor seem to express a concern for the welfare of others.

On the whole, the new scales constructed for this study, as well as the scales drawn from previous work, seem to have the desired statistical properties. Each of the 33 scales appeared to have sufficient homogeneity, reliability, and construct validity to warrant its retention in the analysis. The specific press and attitude scales included were chosen mainly because they seemed useful in probing hypotheses suggested by previous research concerning the effects of exposure to major fields of study. In the next chapter we shall consider these hypotheses and the analyses aimed at assessing the impact of major fields of study upon the undergraduate.

Table 7
Factors and Factor Loadings Obtained
in Factor Analysis of Wave One Scores of Panel B

Factors and scales ^a	Factor-Pattern Coefficients
I. <u>Scientism</u> (18.3%)	
14 Student Press for Science	.82
19 Science Orientation	.75
1 Faculty Press for Science	.67
16 Student Press for Advanced Training	.46
II. <u>Faculty Rapport</u> (17.7%)	
5 Faculty Press for Supportiveness	.87
6 Faculty Press for Affiliation	.87
2 Faculty Press for Advanced Training	.50
3 Faculty Press for Vocationalism	.45
8 Student Opposition to Faculty Influence	-.46
III. <u>Liberalism</u> (16.2%)	
23 Pacifism	.68
28 Civil Rights	.63
20 Free Speech	.57
22 Domestic Social Welfare	.56
27 Conservatism	-.54
IV. <u>Political Participation</u> (13.2%)	
11 Student Press for Political Participation	.84
15 Student Press for Prosocial Concern	.77
17 Student Press for Power	.70
10 Student Press for Reflectiveness	.64
29 Political Activity Index	.32
V. <u>Estheticism</u> (10.5%)	
21 Esthetic Orientation	.72
32 Intellectual Job Orientation	.49
7 Student Press for Estheticism	.49
4 Faculty Press for Humanities	.41
18 Practical Orientation	-.51
VI. <u>Gregariousness</u> (9.3%)	
30 Prosocial Job Orientation	.63
33 Individualistic Job Orientation	.43
12 Student Press for Vocationalism	.27

Table 7--Cont'd.

Factors and scales	Factor-Pattern Coefficients
VII. <u>Conventionalism</u> (7.9%)	
9 Student Press for Playfulness	.57
13 Student Press for Affluence	.47
31 Affluent Job Orientation	.38
VIII. <u>Benevolence</u> (7.0%)	
25 Internationalism	.48
24 Prosocial Orientation	.33
26 Anomia	-.50

^a The percentage of extracted common variance associated with each factor is shown in parentheses after the factor name.

CHAPTER III

EFFECTS OF ENTERING MAJOR FIELDS OF STUDY

The reanalysis of Huntley's (1965) longitudinal study by Feldman and Newcomb (1969) yielded evidence for an accentuation of initial major field differences. While it was not possible to rule out an explanation attributing this accentuation to differential recruitment to major fields during the course of the study, it has been proposed that such accentuation may represent the effects of normative influences in the student's major field. In addition, Feldman and Newcomb have noted that minimization of initial major field differences may also occur, but they were inclined to interpret the latter average change pattern as evidence of college-wide or societal influences. One analytical rule of thumb suggested by these observations, then, is that accentuation is the hallmark of major field influences, while minimization is a symptom of influences external to the major field.

From a somewhat wider perspective, it might be argued that teachers in a major field of study may serve either as models or antimodels. The Feldman and Newcomb analysis seems addressed primarily to the former possibility. If teachers were to function as negative influence agents, would it be reasonable to expect curricular specialization to produce a minimization of initial major field differences? Adelson (1962) has briefly discussed the possibility that teachers may serve as antimodels, suggesting that in such cases the student

.... uses teacher as a lodestar, from which he sails away as rapidly as he can, seeming to say: Whatever he is, I will not be; whatever he is for, I will be against. Teachers who exercise this power of revulsion are, in their own way, charismatic types; indeed the teacher who is charismatically positive for some will be negative for others (p. 414).

Such a view suggests that increased specialization in major fields of study may produce tendencies to become more unlike teachers and peers in one's field. Thus majors in the physical sciences might be stimulated to exhibit science orientations considerably weaker than those modeled by their teachers, while majors in the arts and humanities might be stimulated to exhibit science orientations considerably stronger than those modeled by their teachers. Now if we could assume that prospective majors in a given field had initial attitudes and values roughly matching those of teachers and of advanced students in the field, then such a process could easily produce the pattern of minimization of initial major field differences. The chief difficulty seems to be that if teachers are consistently conceived as antimodels, then some other basis must be found for accounting for initial major field differences. In other words, if the student uses the teacher as "a lodestar from which he sails away as rapidly as he can", then a different lodestar must be invented to account for the fact that students tend to sail to

different initial starting positions.

At any rate, in the analysis to be described we have provisionally assumed that teachers and advanced peers in one's major field of study serve mainly as positive role models. Under such conditions, it seems inappropriate to attribute a minimization of initial major field differences to the effects of increased exposure to major fields of study. It was suggested in Chapter I that this feeling may be rooted in the implicit assumption that initial major field differences are the result of earlier differential exposure to major fields of study.

If exposure to a given major field of study tends to produce a distinctive college press and attitude level, then such effects should co-vary with the student's exposure to his major field of study. As we have seen in Chapter I, the prediction that major field exposures will produce greater accentuation for Panel A than for Panel B members is based upon the assumption that the level of exposure to the major field increases for the former, but remains relatively constant for the latter. To establish the basis for these predictions, then, we shall first consider the proportion of credit-hours students reported taking in their major fields of study.

Exposure to Major Fields of Study

On each survey wave respondents were asked to report both the total credit-hours earned during the preceding academic year and the number of credit-hours earned in their broad major field of study. For each student the latter number was divided by the former number to yield the proportion of hours reportedly taken in the major field during the preceding undergraduate year. Figure 4 shows a plot of the average proportions of hours taken in the major field for Panel A and B members on each wave. As expected, Panel A members exhibited a marked increase in exposure to the major field of study over the three waves, while Panel B members exhibited a relatively constant level of exposure over the two initial waves. Of course, no average proportion was available for Panel B on wave three, since a large proportion of the members of this panel were reporting (in 1971) on their first post-baccalaureate year. For the purposes of this analysis, the "broad" field of study corresponded to the underlined field in the survey questionnaire (Appendix C) and typically included a number of related, specific major fields.

Additional data indicate that during the course of the study Panel A members increasingly described the teachers and students they had "known best" during the preceding academic year as associates in their major field of study. In contrast, Panel B members exhibited relatively small changes in the way they characterized the teachers and peers they had described on these items. Table 8 shows that the percentage of Panel A members who said that most of the faculty members described by them had been in their major field of study increased from 40.0 percent on wave one to 78.1 percent on wave three. Similarly, among Panel A members the percentage saying they had described mostly

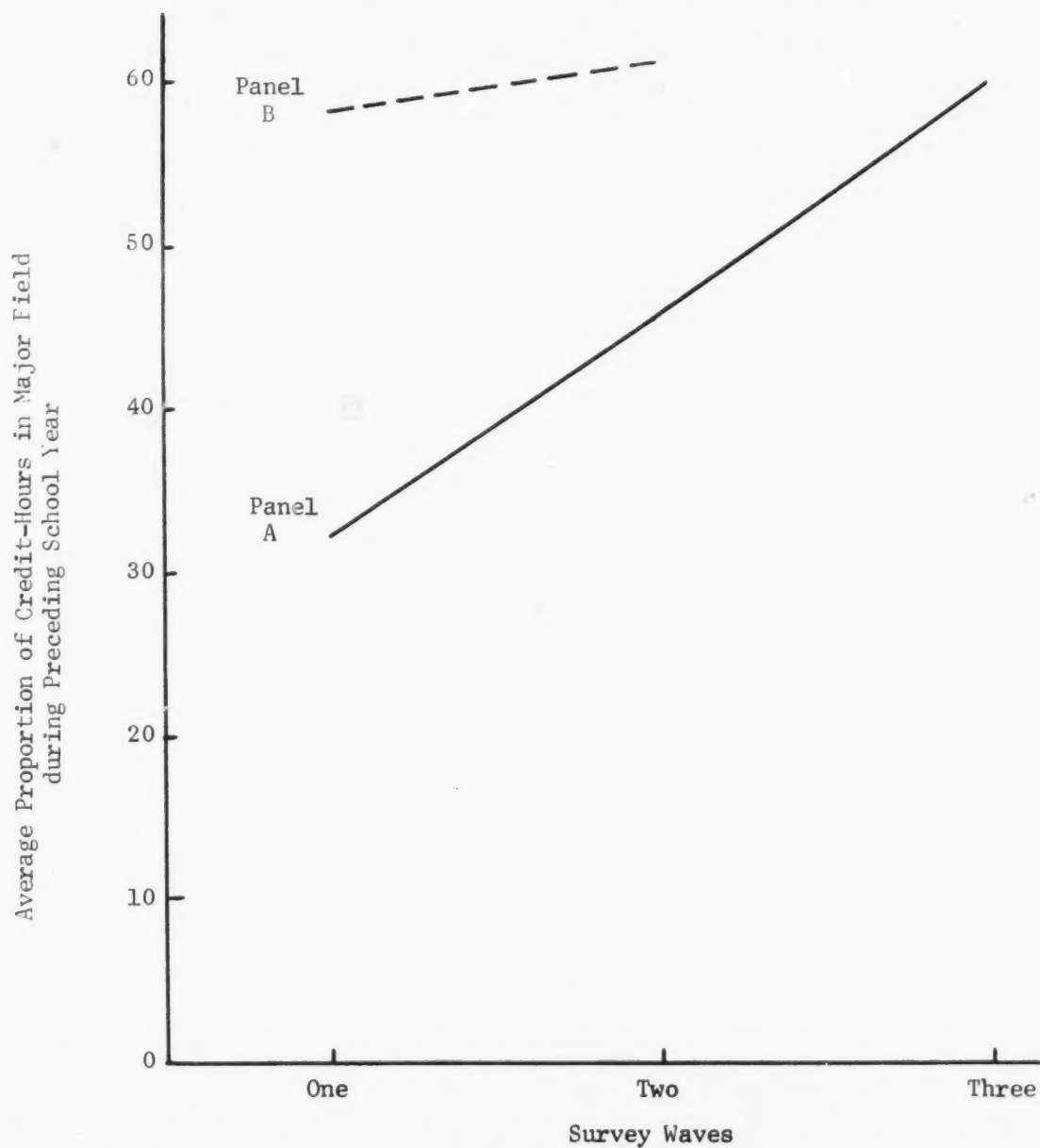


Figure 4. Reported Exposures of Students in Panels A and B to Major Fields of Study on Each Survey Wave

TABLE 8

Teachers and Student Colleagues Described on College Press Items
by Panel Members on Each Wave

Question and responses	Percentages giving each response on each wave				
	Panel A (N=1,036)			Panel B (N=822)	
	1969	1970	1971	1969	1970
Are most of the faculty members you have just described in your major field of study?					
Yes	40.0	61.6	78.1	81.6	83.6
No	58.0	37.0	16.8	17.6	15.0
No response	2.0	1.4	5.1	.7	1.5
Total	100.0	100.0	100.0	99.9	100.1
Which group of undergraduate colleagues have you been mostly describing? (Circle as many as apply)					
Students in my major field	23.6	33.8	38.4	45.5	50.5
Campus groups concerned with political or social issues	5.2	6.2	4.0	6.8	6.0
Fraternity friends	20.7	26.5	22.1	31.6	25.6
Dormitory or living quarter group	74.9	56.0	51.1	46.2	42.6
Other	17.3	24.1	28.1	20.8	22.1

students in the major field of study rose from 23.6 percent on wave one to 38.4 percent on wave three. In contrast, Panel B members showed relatively little variation across the initial two waves in the extent to which they claimed they had described mainly teachers and students in their major fields of study.

Further, it may be inferred that Panel B members, as a whole, experienced reduced exposure to their major fields of study during the academic year 1970-71. Four out of every ten reported they had not attended school during this year (virtually all of these withdrawing from school had obtained their Bachelor's degrees before the start of the year). Of those Panel B members who did attend school, 75 percent reported they were graduate or professional students and only 57 percent of these reported that their graduate or professional curriculum was "directly related" to their undergraduate major field of study.

In sum, these results indicate that the condition necessary for probing (by a multiple time series design) the effects of differential exposure to major fields of study was fulfilled: the changes in degree of exposure to the major field were greater over successive data waves for Panel A than for Panel B. Moreover, the degree to which respondents thought of teachers and students in his major field as those he had known best during the preceding year increased more over waves for Panel A than for Panel B. Both Figure 4 and Table 8 suggest there was a slight increase among Panel B members in exposure to the major field of study from wave one to wave two; therefore Panel B might be expected to show a slight accentuation of initial major field differences during this one-year interval.

The specific fields of study included in the broad major fields to be discussed are enumerated in Table B-2, Appendix B. Students were assigned to broad major fields on the basis of stability of intended or actual major field of study through waves one and two (students manifesting instability were assigned to a miscellaneous category). It was obviously not possible to require stability of major field affiliation through wave three for Panel B; therefore, to avoid introducing differential mortalities in the two panels, no such requirement was made for Panel A.

Effects upon Marker Variables

Figure 5 shows plots of the mean scores of major field groups in Panels A and B on the Faculty Press for Science scale. It is apparent that the overall trajectories of divergence among fields over the initial data waves were more divergent for Panel A than for Panel B. Similar plots are shown in Figure 6 for scores on the Faculty Press for Humanities scale. Again, it appears that a markedly greater accentuation of initial major field differences occurred for Panel A, than for Panel B.

In examining these patterns of mean change more closely, we shall discuss three alternative measures of accentuation: (1) the correlation between mean initial level and mean gain, (2) the increase over successive data waves in the percentage of variance in scale scores associated with

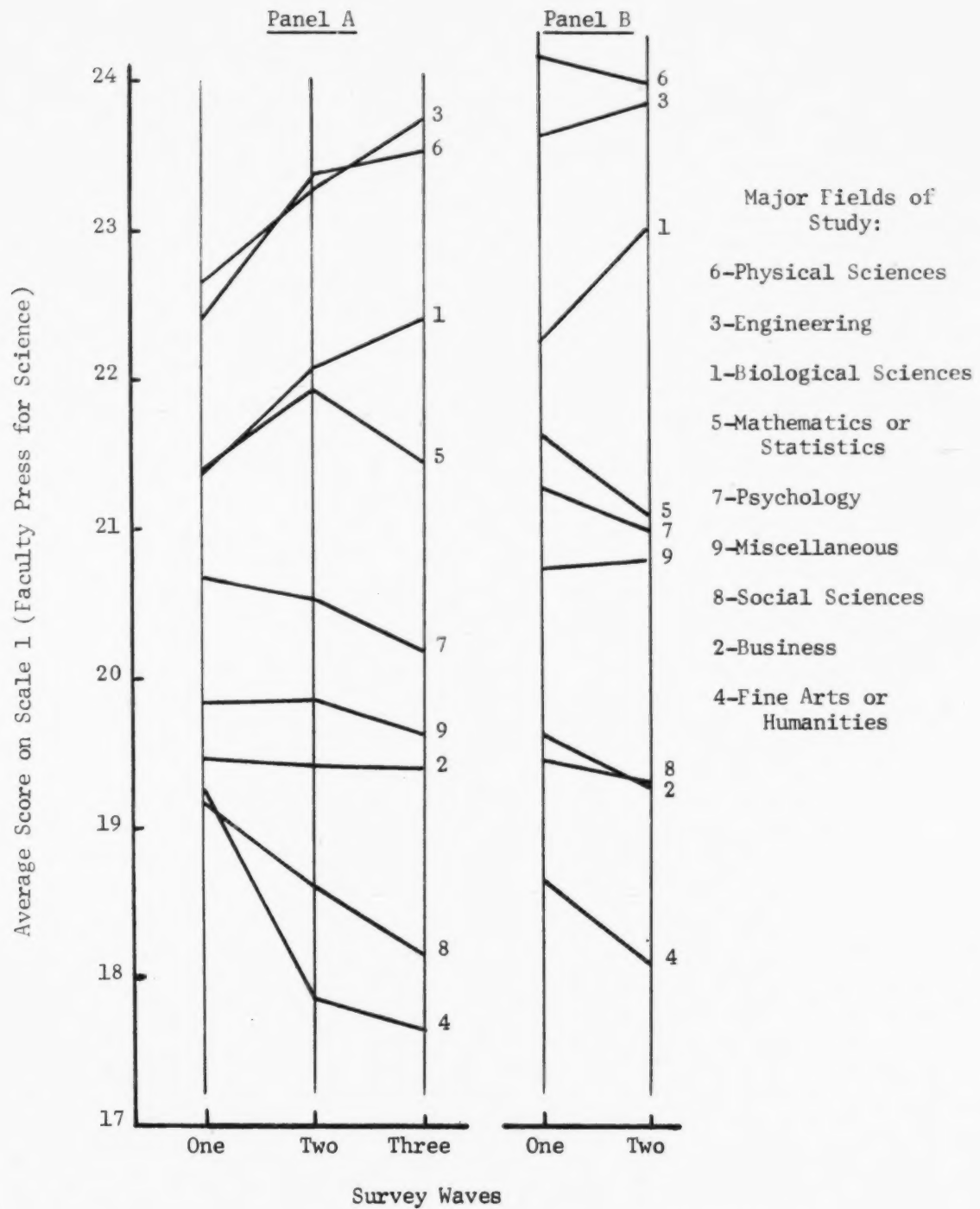


Figure 5. Average Scores on Faculty Press for Science Scale for Panel Members in Nine Major Field Groups

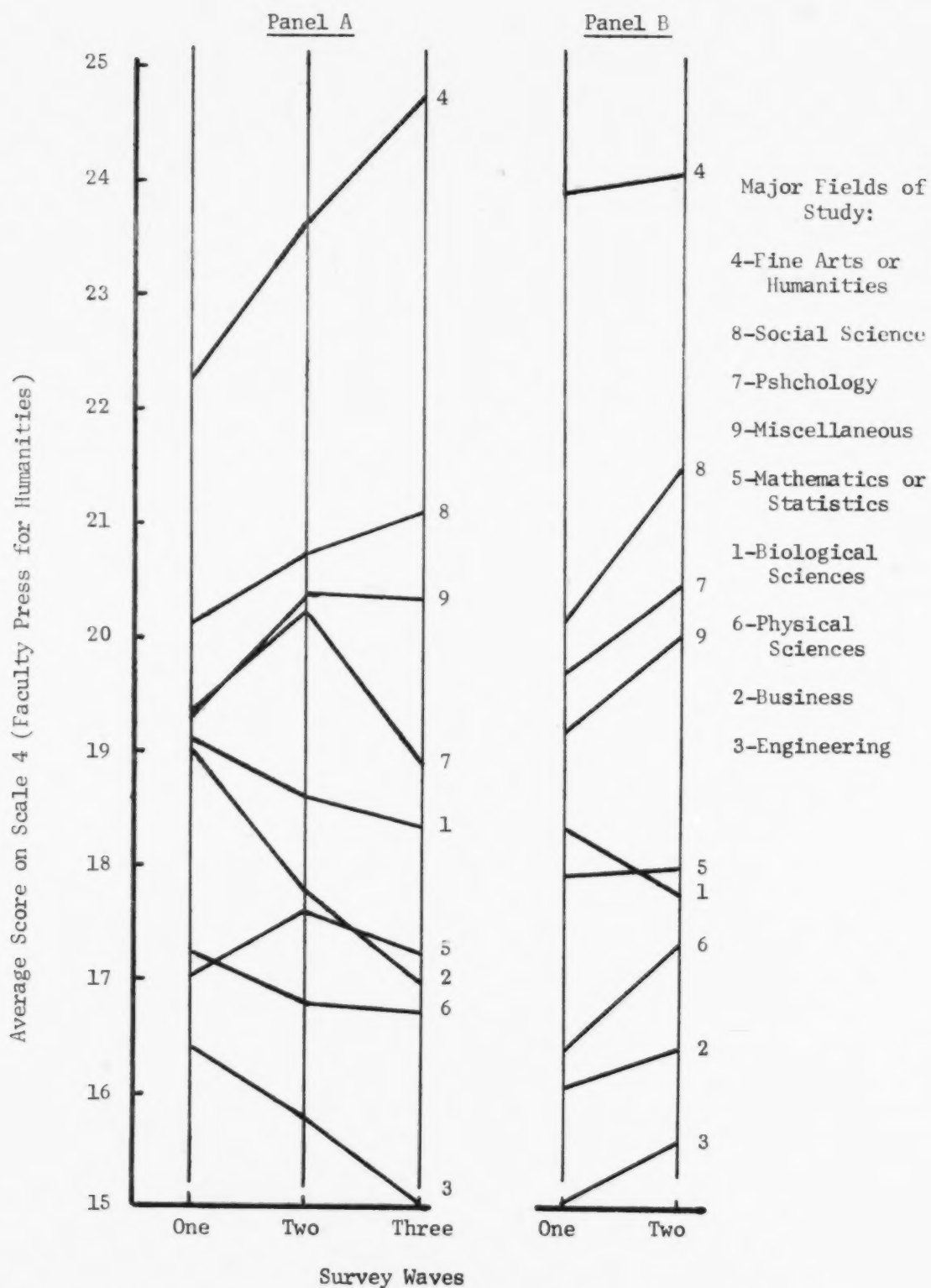


Figure 6. Average Scores on Faculty Press for Humanities Scale for Panel Members in Nine Major Field Groups

the major field classification, and (3) the F-ratio for an analysis of covariance using as the covariate estimates of the mean true-scores of respondents in each major field on wave one. Each of these measures is briefly discussed in considering their application to the data summarized in Figures 5 and 6.

Correlational Measures. Feldman and Newcomb (1969) described the degree of accentuation by a rank-order correlation measure (ρ) expressing the correlation between mean initial field level and the mean gain shown by the given major field group. However, this measure fails to make full use of the information concerning the magnitudes of the differences between fields, and we shall report the product-moment correlation between mean initial level and mean gain. High, positive correlations theoretically indicate accentuation, while high, negative correlations theoretically indicate minimization, of initial major field differences.

Applying such a measure to the data for the Faculty Press for Science scale in Figure 5, we obtain correlations of .84 and .86 for Panel A for the one-year and two-year intervals, respectively, but only a correlation of .47 for Panel B for the one-year interval. Similarly, considering the data for the Faculty Press for Humanities scale in Figure 6, the corresponding correlations for Panel A were .56 and .32, while the correlation for Panel B was -.02. These correlations clearly confirmed the expected differential accentuation of scores on the two marker variables.

It may also be noted that the correlation measure may yield ambiguous results under some conditions. In applying this measure to the four hypothetical cases (I, II, III, and IV) shown in Figure 7, we are apparently led to the correct diagnosis in the first three cases. However, case IV would yield a high, negative correlation, theoretically indicating minimization. In fact, however, case IV is not one of minimization of initial field differences (the extent of the field differences remains unchanged), but rather one of reversal of initial field differences. A second short-coming of this measure is that it lacks power: since there were only nine major field groups (including the residual group) the correlations were based upon only nine pairs of values and had a very large sampling error.

Difference in Omega-Square Estimates. The data for each survey wave may be analyzed by one-way analyses of variance, with major field groups serving as a series of unordered treatments. On the basis of each of these analyses an Omega-square estimate (Hays, 1963, p. 382) may be made of the proportion of variance in the scores on a given scale accounted for by the major field classification. One implication of the prediction that Panel A will exhibit greater accentuation of initial major field differences than Panel B, is that the Omega-square estimates for Panel A should exhibit greater increases over survey waves than those for Panel B.

Applying this measure to the data shown in Figure 5 for the first marker variable, we find that the percentages of variance in scores of

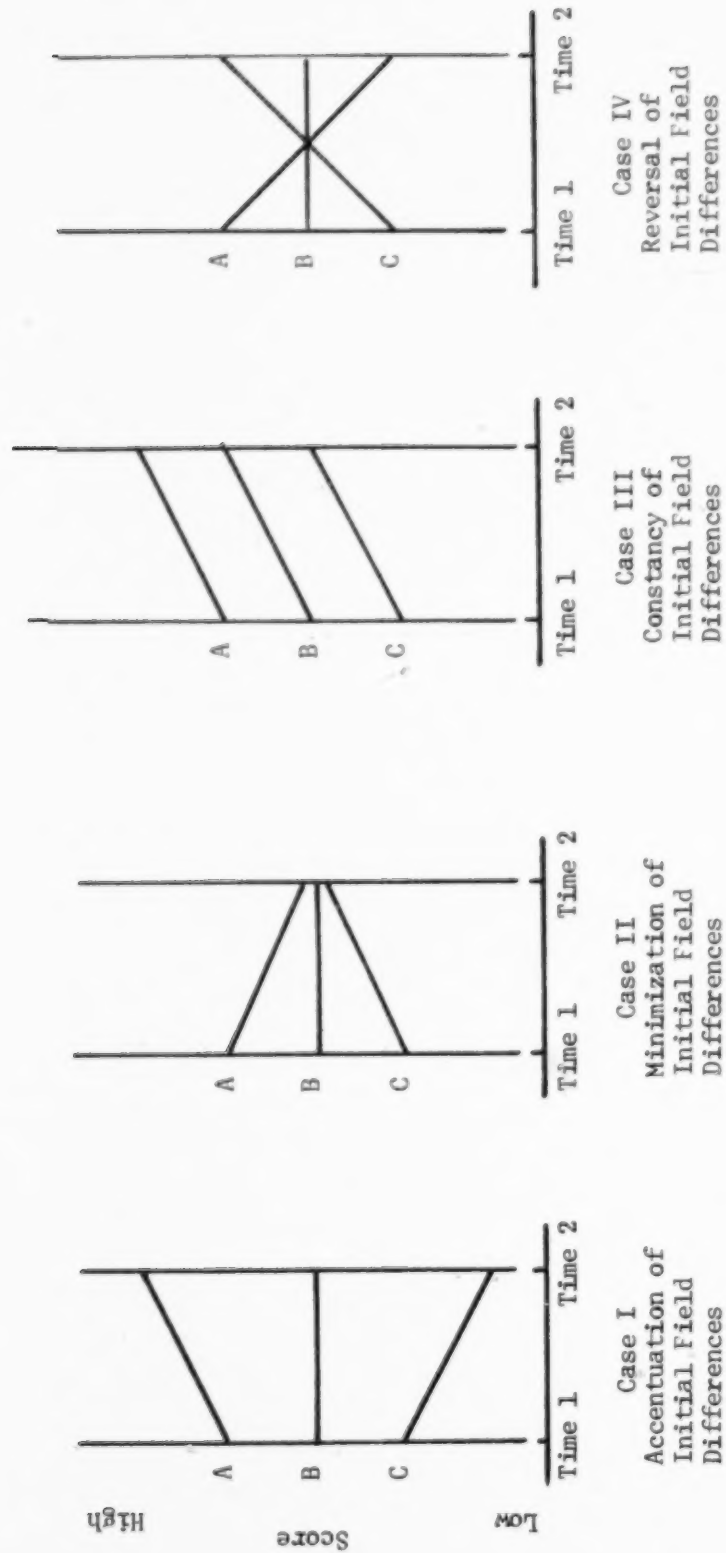


Figure 7. Four Hypothetical Patterns of Change Among Three Major Field Groups

Panel A associated with major fields were 15.6, 23.3, and 25.6 for data waves one, two, and three, respectively. Thus, there were increases in the percentage of variance associated with major fields of about 8 and 10 percent for the one-year and two-year intervals, respectively. In contrast, the percentages of variance of scores of Panel B associated with major fields were 25.3 and 27.5 for waves one and two (an increment of only about 2 percent for the one-year interval). Clearly, scores on the Faculty Press for Science scales showed the expected differential accentuation.

Considering the data shown in Figure 6 for the scale, Faculty Press for Humanities, the percentages of variance in scores of Panel A associated with major fields were 12.5, 23.2, and 28.0 for waves one, two, and three, respectively (increments of about 11 and 15 percent for the one-year and two-year intervals, respectively). The percentages of variance in scores of Panel B associated with major fields were 30.6 and 28.9 for waves one and two (a decrement of about 2 percent for the one-year interval). Thus, the two panels exhibited the expected differential accentuation on the second marker variable also.

One advantage of the Omega-square measure is that it provides a basis for eliminating from consideration those scales on which there are only trivial differences between major field groups. Appendix B (Table B-1) lists the percentages of variance associated with the nine major field groups in each panel on each data wave. The five scales ranking lowest with respect to average percentage of variance associated with major fields across all data waves--scales 2, 5, 6, 8, and 25--were eliminated from the additional analyses to be described in this chapter.

This Omega-square measure differs from the correlation measure in that it is generally sensitive to accentuation or minimization patterns of all kinds. The difference between estimates of proportions of variance associated with major fields on earlier and later data waves is primarily sensitive to increasing (or decreasing) differentiation between groups. It does not necessarily reflect accentuation (or minimization) of initial major field differences. Nonetheless, it may be argued that the accentuation patterns to which this measure is sensitive are equally appropriate indicants of the impacts of exposure to major fields of study. Applying this measure to the four cases shown in Figure 7 would result in the correct diagnosis for each case: the measure would indicate for cases I and II accentuation and minimization, respectively; for cases III and IV it would indicate neither accentuation nor minimization.

True-Score Analysis of Covariance. Campbell and Stanley (1963) have recommended covariance analysis as an appropriate mode of analysis for designs similar to that employed here. Thus, the observed mean posttest differences between various treatments may be adjusted on the basis of a covariate (mean pretest scores). However, it has been recognized by Lord (1960) and others (Smith, 1957; Porter, 1967) that conventional analysis of covariance may yield inappropriate adjustments. The inappropriateness of the adjustments, Lord pointed out, typically lies in the fact that the regressions of the dependent variable upon

true scores on the covariate have a steeper slope than the regressions of the dependent variable upon fallible scores on the covariate. As a consequence the usual covariance analysis results in an underadjustment for initial group differences on the pretest. Lord (1960) described a significance test for covariance analysis which takes account of the fallible nature of the covariate; but his U statistic is limited to the comparison of only two treatment groups. More recently, Porter (1967) has proposed (and confirmed by Monte Carlo analyses) a more generally applicable solution, which consists in performing the covariance analysis using estimated true pretest scores as the covariable. In using Porter's procedures, the one-month reliability estimates for scale scores given in Table 6 were used to estimate true scores on scales on the pretest (wave one). Thus the magnitude of the F-ratio for evaluating the null hypothesis that there are no wave two, (or wave three) differences among major field groups after adjusting for true-score differences on the covariate (wave one) provides still a third indicant of whether accentuation has occurred.

A true-score analysis of covariance on the data of Figure 5 indicates that the adjusted mean field differences for the wave two scores for Panel A are highly significant ($F = 12.66$, $df = 8/1026$, $p < .01$), as are the adjusted differences on wave three ($F = 17.18$, $df = 8/1026$, $p < .01$). In contrast, similar analysis of the data for Panel B yielded evidence of less marked, though still significant, differences between fields in mean adjusted scores on wave two ($F = 5.31$, $df = 8/812$, $p < .01$).

Considering the data of Figure 6, on the second marker variable, the true-score analysis of covariance indicated that there are highly significant field differences in average adjusted wave two scores ($F = 16.68$, $df = 8/1026$, $p < .01$) and in adjusted wave three scores ($F = 26.55$, $df = 8/1026$, $p < .01$). As expected, the F-ratio for evaluating the differences in adjusted mean scores of major fields on wave two for Panel B was smaller ($F = 4.75$, $df = 8/812$, $p < .01$).

The adjusted means for these analyses are shown in Table 9. It can be seen that the ranges in adjusted means were greater for Panel A than Panel B, for each of the marker variables. These results clearly exhibit the expected differential accentuation (greater adjusted mean differences between fields for Panel A than for Panel B).

The chief advantage of true-score covariance analysis is that it provides a test of significance of the adjusted differences between fields. If the F-ratio for adjusted means fall short of statistical significance then the observed posttest differences between fields may be attributed to initial field differences. However, a significant F-ratio is not necessarily indicative of accentuation. As many of the tables to be discussed in this chapter indicate, a significant F-ratio for adjusted differences was frequently, though not invariably, associated with a minimization pattern. In general, when minimization occurs

Table 9
Adjusted Mean Scores of Major Field Groups
on Marker Variables

Major field group	Adjusted mean score ^a					
	4 Humanities (FP)			1 Science (FP)		
	Panel A		Panel B	Panel A		Panel B
	Wave two	Wave three	Wave two	Wave two	Wave three	Wave two
Fine arts or Humanities	2.28	3.77	1.24	-1.84	-2.02	-1.18
Miscellaneous	.74	.83	1.15	-.19	-.37	.09
Social Sciences	.63	1.20	.52	-1.03	-1.48	-.50
Psychology	.59	-.59	.44	-.03	-.26	-.11
Mathematics or Statistics	-.70	-1.14	-.27	.94	.59	-.24
Biological Sciences	-.93	-1.05	-.71	1.09	1.56	1.23
Physical Sciences	-1.65	-1.74	-.98	1.74	2.08	.89
Business	-1.72	-2.37	-1.08	-.40	-.38	-.66
Engineering	-2.16	-3.01	-1.25	1.54	2.15	1.10
Range (between highest and lowest means)	4.44	6.78	2.49	3.58	4.17	2.41
F-ratio (for comparing adjusted means)	16.68	26.55	4.75	12.66	17.18	5.31

^a Entries are mean deviations from the average adjusted score for each panel on each wave. All adjusted means were based upon analysis of covariance using estimated true-score on wave one as the covariate.

the adjusted mean differences may or may not be statistically significant. Thus, in the following analyses, a significant F-ratio for the true-score analysis of covariance is interpreted as a necessary, though not a sufficient, condition for diagnosing accentuation of major field differences.

Summary of Alternative Indicators of Accentuation. Clearly each of the three alternative measures of accentuation yields the same diagnosis for the data shown in Figures 5 and 6: Panel A exhibited greater accentuation of major field differences (on each marker variable) from wave one to wave two than did Panel B. At the same time, there are circumstances under which each of these indices may be misleading. The correlation measure may erroneously classify fields exhibiting reversal of initial field differences; the change in Omega-square estimates is at best a rule of thumb criterion (lacking a test of significance of the increase in proportion of variance accounted for); the true-score covariance analysis specifies a necessary, but not sufficient, condition for diagnosing accentuation of major field differences. In the following discussion, we shall therefore report each of these three indices of accentuation, and diagnose accentuation primarily on the basis of consistency among the alternative indicators.

Effects upon Scientific Press and Orientations

The results for the four scales with high loadings on the Scientism factor (Table 7) will be considered first. Initial expectations were most explicit with respect to Scales 1, 14, and 19 (i.e., it was expected that the predicted differential accentuation would be most marked on these scales). The three indices of accentuation for Scale 1 (Faculty Press for Science) are recapitulated in Table 10, along with indices for each of the other scales loading highly on Scientism. First, it can be seen that the expected differential accentuation occurred on both scales 1 and 14. Moreover, the adjusted field means (true-score analyses of covariance) on scales 1 and 14 were highly correlated: for Panel A these correlations were .93 and .88 for the one-year and two-year intervals, respectively; for Panel B the correlation was .89 for the one-year interval. In other words, the major fields showing the greatest adjusted mean scores with respect to Faculty Press for Science were the very ones tending to show the greatest adjusted mean scores with respect to Student Press for Science. In short, faculty and student press for science tended to co-vary together across fields of study: fields initially high, and tending to show increases, with respect to faculty press of this type also tended to be high and to show increases with respect to student press of a similar type. Thus it may be said that there was considerable congruency in the kinds of faculty and student press to which students in a given major field of study were exposed.

Nonetheless, there was virtually no evidence that exposures to major fields of study differentially affected the students' scientific orientations. Table 10 shows that on scale 19 (Science Orientation) both Panels A and B exhibited minimization of initial major field

Table 10

Accentuation Indices for Major Field Groups on Press and
Attitude Scales Related to Scientism Factor

Scale	Panel ^a	Correlation (mean initial level vs. mean gain)	Change in percent of variance associated with major fields	F-ratio (true- score analysis of covariance)	Pattern of change ^b
1 Science (FP)	A (1)	.84**	7.7	12.66**	A
	B (1)	.47	2.2	5.31**	---
	A (2)	.86**	9.9	17.18**	A
14 Science (SP)	A (1)	.59	4.8	10.12**	A
	B (1)	.38	-.3	3.24**	---
	A (2)	.66	4.0	10.53**	A
16 Advanced Training (SP)	A (1)	-.62	-.5	1.47	---
	B (1)	-.48	-1.9	1.70	M
	A (2)	-.53	-.4	1.31	---
19 Science Orientation	A (1)	-.46	-2.8	2.51*	M
	B (1)	-.87**	-3.7	1.88	M
	A (2)	-.67*	-7.5	2.13*	M
	B (2)	-.92**	-9.1	1.16	M

^a Numbers in parentheses after the panel letter indicate whether indices are for a one-year interval (1969-70) or for a two-year interval (1969-71).

^b A indicates an accentuation pattern, M a minimization pattern, and a blank indicates that neither pattern was clearly predominant.

* $p < .05$

** $p < .01$

differences, both over the one-year and the two-year intervals. The failure to confirm the hypothesized effects of major field exposures upon the science orientations of students is particularly noteworthy considering the sensitivity of the Science Orientation scale. Of the 33 scales this one was the most successful in differentiating between students in various major fields of study. Table B-1 in Appendix B shows that this scale ranked highest with respect to average percentage of variance associated with major fields across panels and waves. Figure 8 shows a plot of the average scores on the Science Orientation scale of the major field groups in each panel over the three measurement occasions. While there were large initial differences between fields in average Science Orientation scores, these differences paradoxically tended to decrease (rather than increase) over time as students increasingly specialized in their major fields of study. The minimization pattern of change shown for scale 19 in Table 10 may suggest to some readers that teachers and peers in the major field served as anti-models. However, the antimodel interpretation does not appear to be fully consistent with the results on the Science Orientation scale. Thus if we assert that minimization is a reasonable consequence of increased exposures to major fields, then the change pattern should be more pronounced for Panel A (which experienced the greatest increases in exposure to the major fields). However, contrary to this expectation Table 10 shows that Panel B exhibited the greater minimization of initial major field differences.

Effects upon Esthetic Press and Orientations

It was hypothesized on the basis of previous research that increased exposures to major fields of study would produce greater accentuation for Panel A both on measures of faculty and student press for estheticism (scales 4 and 7) and upon the esthetic orientations of students (scale 21). Table 11 summarizes the obtained results for scales loading highly on the estheticism factor. Briefly, the predicted ecological effects of entering varied fields of study were confirmed, but there was no evidence of the expected effects upon the esthetic orientations of students. As we have seen, all three measures indicate that there was greater accentuation of initial major field differences for Panel A with respect to Faculty Press for Humanities. A similar pattern appears to hold for scores on the Student Press for Estheticism scale, although the difference in correlations was trivial. But neither of the attitudinal measures (scales 21 and 32) showed any evidence of differential accentuation. The hypothesis with respect to the effects of increased exposures to major fields of study upon the esthetic orientations of students was unconfirmed.

Again, it may be noted this disconfirmation can hardly be attributed to any lack of sensitivity in the Esthetic Orientation scale, since it ranked near the top of the 33 scales with respect to the average proportion of variance associated with major fields of study (Table B-1, Appendix B). A plot of the average scores on the Esthetic Orientation scale for students in various major fields of study (Figure 9) shows

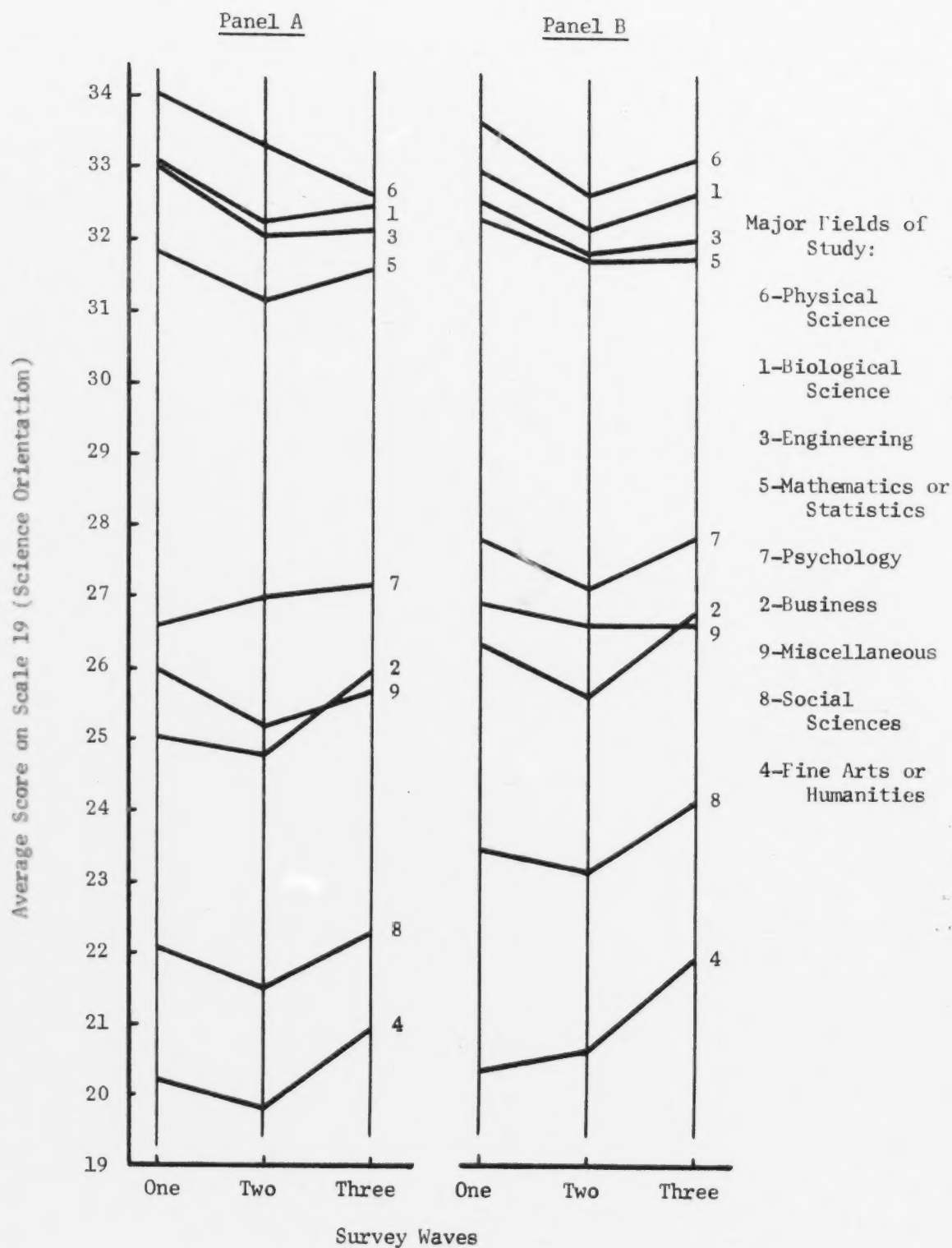


Figure 8. Average Scores on Science Orientation Scale for Panel Members in Nine Major Field Groups

Table 11

Accentuation Indices for Major Field Groups on Press and Attitude Scales Loading Positively on the Estheticism Factor^a

Scale	Panel	Correlation (mean initial level vs. mean gain)	Change in percent of variance associated with major fields	F-ratio (true- score analysis of covariance)	Pattern of change
4 Humanities (FP)	A (1)	.56	10.7	16.68**	A
	B (1)	-.02	- 1.8	4.75**	--
	A (2)	.32	15.4	26.55**	A
7 Estheti- cism (SP)	A (1)	.15	2.5	4.08**	A (?)
	B (1)	.13	- .3	2.47*	--
	A (2)	.54	3.4	5.10**	A
21 Esthetic Orientation	A (1)	-.21	- .9	1.35	--
	B (1)	-.69*	- 2.2	.83	M
	A (2)	-.17	- .6	2.21*	--
	B (2)	-.33	- 1.1	1.51	--
32 Intellec- tual Job Orientation	A (1)	-.76*	- 1.6	1.20	M
	B (1)	.24	.2	1.49	--
	A (2)	-.75*	- 1.2	.58	M
	B (2)	.30	.2	1.26	--

^a See footnotes to Table 10.

* $p < .05$

** $p < .01$

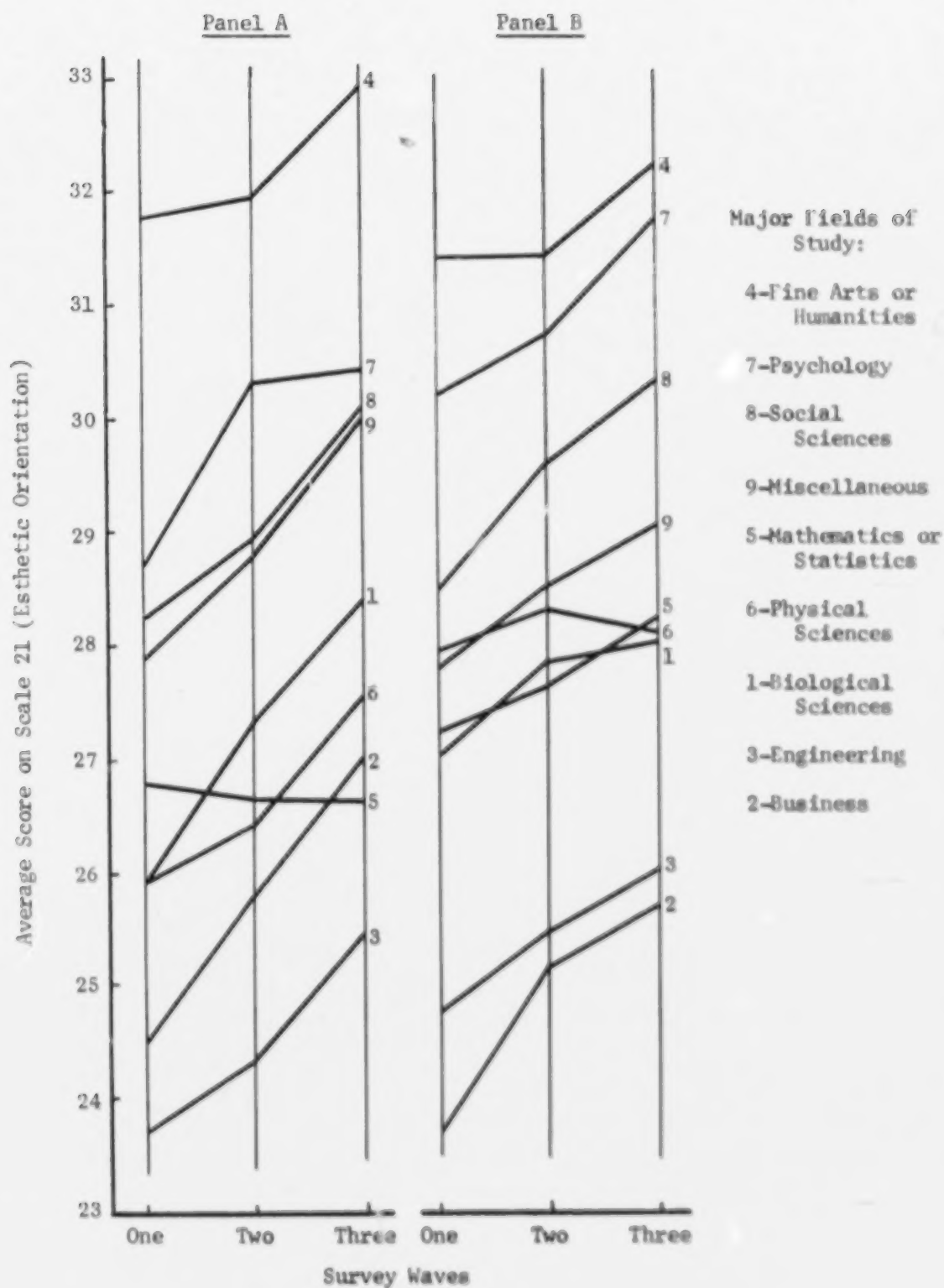


Figure 9. Average Scores on Esthetic Orientation Scale for Panel Members in Nine Major Field Groups

the increases over the college years in estheticism typically found by previous investigators, but fails to show any evidence of greater accentuation of initial major field differences in Panel A as compared with Panel B.

Effects upon Press for Vocationalism and Practical Orientations

Table 12 shows that Panel A exhibited greater accentuation of initial major field differences than Panel B for scores on scale 12 (Student Press for Vocationalism). Panel A members majoring in engineering or business had the highest average scores on this scale on each wave (and panel members majoring in the fine arts or humanities had the lowest average scores on each wave), with the differences between fields being greatest on the last wave. The results were somewhat mixed for scores on scale 3 (Faculty Press for Vocationalism): if we compare panels just over the one-year interval Panel B appeared to exhibit greater accentuation than Panel A, but Panel A showed a rather sizeable accentuation over the two-year interval. In any case, the results for indices of the effects upon students' practical orientations show no such ambiguity: the results on scale 18 (Practical Orientation) and on scale 31 (Affluent Job Orientation) were consistently negative in showing no evidence of greater accentuation of initial major field differences for Panel A.

These results correspond roughly with those exhibited for the scientism and estheticism domains. Increased exposures to major fields of study appeared to produce the predicted ecological effects but did not have the expected attitudinal effects.

Effects upon College Press and Attitudes Related to Political Participation

Of the five scales having their highest loadings on the political participation factor, the single attitude measure (scale 29) was the only one yielding clear evidence of differential accentuation. Table 13 shows that on scale 29 (Political Activity Index) Panel A members exhibited greater accentuation of initial major field differences than Panel B over the one-year interval. For example, the major field groups in Panel A having the highest adjusted mean scores on wave two were Psychology and Social Sciences, while the groups having the lowest adjusted mean scores were Business and Engineering. However, these differential accentuation effects disappeared when changes over the two-year interval were considered.

Effects upon Attitudes Related to the Liberalism Factor

Table 14 summarizes the results for the five attitude scales in the liberalism cluster. It may be noted that of these five scales, scale 23 (Pacifism) had the highest loading on the Liberalism factor (Table 7), and also had the highest rank (of the five) in Table B-1 (Appendix B) indicating that the major field classification accounted

Table 12

Accentuation Indices for Major Field Groups on Press and
Attitude Scales Related to Vocationalism and Practical Orientations^a

Scale	Panel	Correlation (mean initial level vs. mean gain)	Change in percent of variance associated with major fields	F-ratio (true- score analysis of covariance)	Pattern of change
3 Vocation- alism (FP)	A (1)	.57	1.7	5.11**	A
	B (1)	.63	4.6	5.85**	A
	A (2)	.46	5.2	9.87**	A
12 Vocation- alism (SP)	A (1)	.50	1.8	3.19**	A
	B (1)	.27	.5	1.66	--
	A (2)	.40	2.7	5.50**	A
18 Practical Orientation	A (1)	-.50	-3.0	1.21	M
	B (1)	-.26	2.5	2.38*	--
	A (2)	-.61	-5.2	2.69**	M
	B (2)	-.63	-3.6	1.30	M
31 Affluent Job Orien- tation	A (1)	-.40	- .6	1.40	--
	B (1)	-.12	.6	2.11*	--
	A (2)	-.45	-1.1	1.84	M
	B (2)	-.56	-1.8	1.52	M

^a See footnotes to Table 10.

* $p < .05$

** $p < .01$

Table 13

Accentuation Indices for Major Field Groups on Press and
Attitude Scales Related to Political Participation^a

Scale	Panel	Correlation (mean initial level vs. mean gain)	Change in percent of variance associated with major fields	F-ratio (true- score analysis of covariance)	Pattern of change
10 Reflective- ness (SP)	A (1)	-.42	1.0	3.34**	--
	B (1)	-.27	-1.0	1.69	--
	A (2)	-.12	2.0	4.63**	--
11 Political Participa- tion (SP)	A (1)	.32	1.4	2.67**	A (?)
	B (1)	.06	.2	1.58	--
	A (2)	-.54	-1.6	1.09	M
15 Prosocial Concern (SP)	A (1)	-.34	.2	3.79**	--
	B (1)	-.82**	-2.1	.20	M
	A (2)	-.30	-2.0	3.54**	M
17 Power (SP)	A (1)	.04	.9	2.89**	--
	B (1)	-.42	-2.2	.85	M
	A (2)	.39	.5	2.26*	--
29 Political Activity Index	A (1)	.53	1.7	2.92**	A
	B (1)	.14	.0	1.20	--
	A (2)	.25	.8	2.41*	--
	B (2)	-.07	.2	1.50	--

^a See footnotes to Table 10.

* $p < .05$

** $p < .01$

Table 14

Accentuation Indices for Major Field Groups on Press
and Attitude Scales Related to Liberalism^a

Scale	Panel	Correlation (mean initial level vs. mean gain)	Change in percent of variance associated with major fields	F-ratio (true- score analysis of covariance)	Pattern of change
20 Free Speech	A (1)	-.45	- .4	.62	--
	B (1)	-.40	- .8	1.55	--
	A (2)	-.20	.5	1.24	--
	B (2)	-.71	-1.6	.91	M
22 Domestic Social Wel- fare	A (1)	-.65	-1.1	1.46	M
	B (1)	-.41	- .5	.43	--
	A (2)	-.59	- .1	2.59**	--
	B (2)	-.63	-1.2	1.88	M
23 Pacifism	A (1)	-.72*	-3.1	2.01*	M
	B (1)	-.22	- .4	.80	--
	A (2)	-.83*	-1.8	1.45	M
	B (2)	-.66	-3.2	.82	M
27 Conserva- tism	A (1)	-.50	- .1	1.87	--
	B (1)	.17	1.7	2.35*	--
	A (2)	-.19	1.0	2.55**	--
	B (2)	.28	1.0	1.42	--
28 Civil Rights	A (1)	-.45	.0	2.41*	--
	B (1)	.23	2.1	3.18**	--
	A (2)	-.12	1.4	3.88**	--
	B (2)	-.29	.5	1.26	--

^a See footnotes to Table 10.

* $p < .05$

** $p < .01$

for a relatively high proportion of variance in scores on this scale. Majors in the Fine Arts or Humanities and in Psychology had the highest mean scores on each wave, while majors in Business or Engineering tended to have the lowest mean scores on each wave. Nonetheless, Table 14 shows that there was no evidence of the expected differential accentuation of initial major field differences, suggesting that increased exposures to major fields had no measurable effects upon these attitudes.

It was suggested earlier that minimization of initial major field differences may be symptomatic of college-wide or societal influences. It is of some interest therefore to note that both panels tended to exhibit minimization of initial major field differences on scale 23 (Pacifism); it will be shown in Chapter IV that scores on this scale appear to be unusually sensitive to influences external to the major field of study.

Effects upon Other Press and Attitude Scales

The results for press and attitude scales related to the Benevolence, Conventionalism, and Gregariousness factors are summarized in Table 15. Only on scale 9 (Student Press for Playfulness) was there a clear tendency for Panel A to exhibit greater accentuation than Panel B; however, this difference was unstable, for among Panel A members the accentuation of major field differences over the two-year interval was trivial.

Outcomes and External Events

How should we interpret the rather consistent failure to find greater accentuation of initial major field differences with respect to attitudes among the members of Panel A? One interpretation is that teachers and peers in the major fields generally do not exercise significant normative influences upon the kinds of attitudes assessed here. Another interpretation is that these outcomes were highly conditional upon other events occurring during the study. We know, for example, that the Cambodian invasion and the shootings at Kent State and Jackson State all occurred shortly before wave two. In Chapter I it was suggested (in discussing Figure 1) that major field influences were expected to produce accentuation of initial major field differences, but that college-wide, or societal, influences might be expected under some circumstances to obliterate the effects of exposures to major fields. To explore the question of competing influences, we shall therefore consider in the next chapter analyses showing how overall trends in average changes in attitudes and press were related to external events during the longitudinal study.

Table 15

Accentuation Indices for Major Field Groups on Press and Attitude Scales Related to Benevolence, Conventionalism, and Gregariousness^a

Scale	Panel	Correlation (mean initial level vs. mean gain)	Change in percent of variance associated with major fields	F-ratio (true score analysis of covariance)	Pattern of change
<u>Benevolence:</u>					
24 Prosocial Orienta- tion	A (1)	-.20	.1	3.04**	--
	B (1)	.03	1.6	2.49*	--
	A (2)	.08	-2.6	1.05	--
	B (2)	-.16	- .2	2.32*	--
26 Anomia	A (1)	-.03	.6	1.46	--
	B (1)	.11	1.7	2.02*	--
	A (2)	.43	2.2	2.70*	--
	B (2)	.17	1.9	2.31*	--
<u>Conventionalism:</u>					
9 Playful- ness (SP)	A (1)	.57	2.6	3.57**	A
	B (1)	-.69	-1.4	.97	M
	A (2)	-.17	.4	1.12	--
13 Affluence (SP)	A (1)	.06	.6	1.53	--
	B (1)	.15	.8	1.15	--
	A (2)	.44	1.6	2.63**	A
<u>Gregariousness:</u>					
30 Prosocial Job Orien- tation	A (1)	-.20	.4	1.98*	--
	B (1)	.12	.0	1.04	--
	A (2)	-.08	- .2	1.65	--
	B (2)	.02	.1	2.08*	--
33 Individual- istic Job Orientation	A (1)	-.24	.4	1.07	--
	B (1)	-.17	.7	1.34	--
	A (2)	-.27	.4	1.93	--
	B (2)	-.21	.5	1.47	--

^a See footnotes to Table 10.

* $p < .05$

** $p < .01$

CHAPTER IV

THE IMPACT OF CAMBODIA AND COLLEGE-WIDE INFLUENCES

This study obtained reports from student panel members first in Summer, 1969, and then again in each of the two succeeding summers. Thus the mailing for wave two (June, 1970) occurred only two months after President Nixon announced that United States ground troops had been sent into Cambodia. In describing the ensuing protests on the Berkeley campus, Chancellor Roger Heyns said in his Report to Regents' Committee on Educational Policy (1970):

The power and strength of this outburst was awesome. It was a great groundswell, a tidal movement of genuine feeling and opinion on the part of most students and many faculty, expressive of real concern over the present problems and the future destiny of the United States. There has been nothing like it before in American history. It was real and it had to be heeded. No one on campus doubted this.

In retrospect, the panel study was well timed to reveal information about the impact of this episode of dissent and disruption, even though the timing of these events were hardly optimal for revealing the impacts of major fields of study alone. In any event, the juxtaposition of exposures to both academic and college-wide or societal influences provided an unusual opportunity to study the varied conditions under which accentuation or minimization patterns of change in student attributes are observable.

For purposes of analysis we may distinguish between two major types of stimulation which may have competed with the distinctive influences of major fields of study: First, there are those which appeared to be spasmodic, having the character of episodes which were preceded and followed by relatively different states of affairs. The Cambodian outburst in May, 1970, is the best example of a spasmodic, or episodic, influence. Second, there are those stimulations which appeared to be fairly continuous in their operation. A good example of an influence acting in a more or less continuous fashion upon panel members is student press for estheticism. In the sections which follow we shall consider indicants suggesting that each type of influence was operative and examine trends in attitude change for evidence that exposure to such stimuli may have had an impact upon student attitudes. The strategy is similar to the time-series comparisons already discussed: the temporal trends for the operation of given types of stimulation are described, and then similar trends in changes of specific attitudes of panel members are noted. Evidence of effect consists in the observation that potential causes and effects do indeed wax and wane in concomitant fashion over time. A final section discusses the implications of these results for interpreting the findings concerning accentuation or minimization of initial major field differences in attitudes.

Episodic Influences upon Panel Members

There were two kinds of episodic influences which may be documented in the data: those associated with protest subcultures and those associated with the perceived press of close friends and associates. We shall discuss first the frequency of occurrence of various types of protests and demonstrations on each of the campuses described by our respondents and the respondents' reported degree of participation in these activities and subcultures. We shall then consider the related data on the faculty and student press scales.

Student Protests and Demonstrations. Each survey questionnaire contained the question, "Has your campus experienced any student protests or demonstrations during the past academic year?" Figure 10 shows that during the academic year 1968-69 student protests or demonstrations were reported by 93 percent of all respondents (92.6 percent of Panel A and 94.0 percent of Panel B). This percentage rose to 98 percent during the academic year 1969-70. However, the frequency of such demonstrations declined precipitously during the last survey year: among Panel A respondents the percentage reporting such demonstrations during the final year dropped to 59.1 percent.

Even more striking than the variation in frequency of occurrence of campus demonstrations over the three survey years was the variation in the content of the demonstrations recalled by students. If a student indicated on a given survey wave that one or more demonstrations had occurred on his campus during the preceding year he was asked to characterize the main goals of the "most memorable demonstration." The results of a content analysis of these replies yielded the classification of demonstrations summarized in Table 16. It should be noted that the percentages summarized in this table are based upon all members of each panel; if a panel member reported that no protest or demonstration had occurred on campus during the preceding year and wrote nothing concerning the main goals of the most memorable demonstration he was counted as giving "no response" in Table 16. Also, even though respondents were asked to characterize only the main goals of the single, most memorable demonstration of the year, some described more than one demonstration or more than one goal; in such cases, coders were instructed to code only the single goal mentioned first by the respondent.

In Table 16 the primary demonstration goals described by students have been classified into three main categories: war or military activities, minority groups, and student-administration relations. By all odds, the most dramatic variation in the frequency of mention of demonstrations of a given type occurred in protests related to the Vietnam war or to military activities. On wave one only about 29 percent of the goals mentioned by Panel A fell in this category, but on wave two--which as we have already noted came shortly after the Cambodian incursion and the Kent State shootings--over 78 percent of the demonstrations described concerned the war or military activities. By wave three the frequency of mention of such demonstrations dropped sharply to only

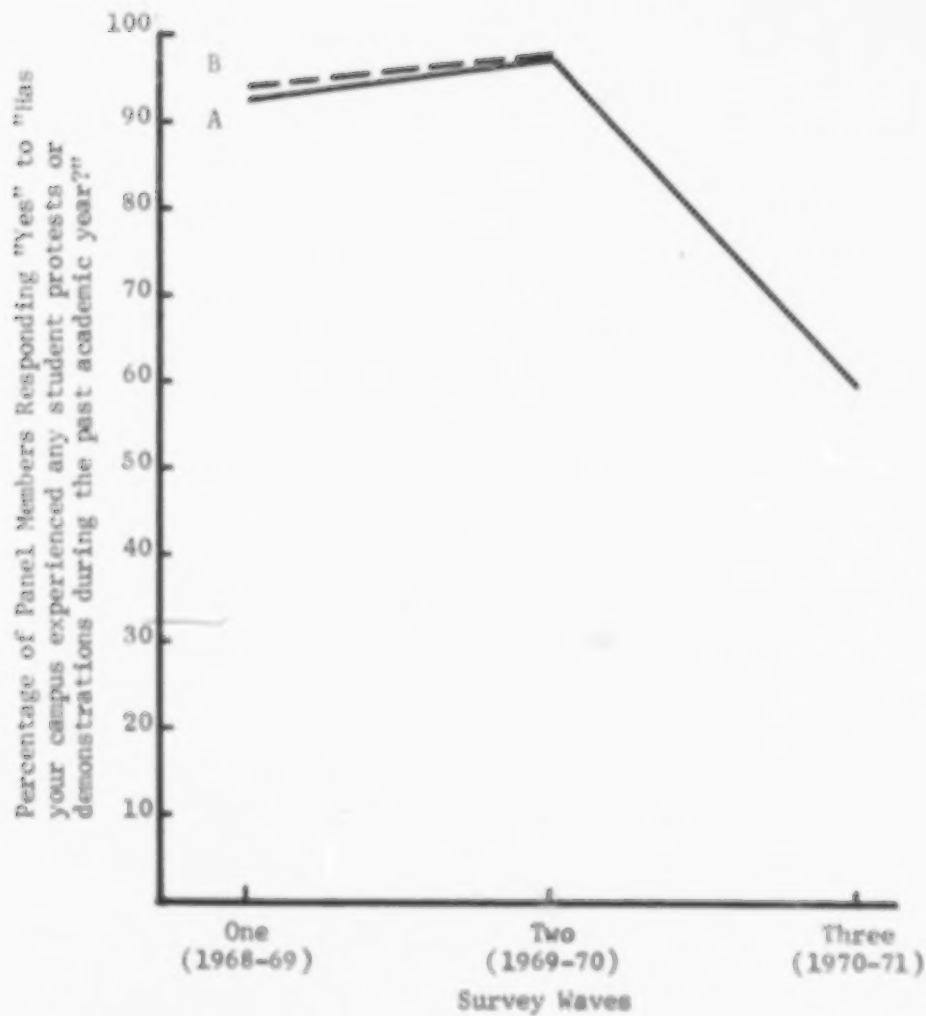


Figure 10 Frequency of Occurrence of Campus Demonstrations
Reported by Panels A and B

TABLE 16

Percentages of Panels A and B Attributing Given Goals to the Most Memorable Campus Demonstrations on Each Survey Wave

Main Goals Attributed to Most Memorable Demonstration	Panel A (N = 1,036)			Panel B (N = 822)	
	Academic year			Academic year	
	68-69	69-70	70-71	68-69	69-70
<u>I. Goals related to war or military activities</u>					
Protest of Vietnam war	3.4	53.7	21.0	7.3	50.1
Abolishment of ROTC requirement or training	18.6	11.1	4.7	19.7	11.2
Protest Kent State shootings	--	8.3	1.6	--	6.7
Oppose intelligence and military recruiting on campus	1.8	3.8	2.1	2.8	3.6
Oppose classified or military research on campus	4.3	.5	--	5.1	.2
Miscellaneous goals related to war	<u>1.3</u>	<u>.9</u>	<u>1.7</u>	<u>2.6</u>	<u>1.3</u>
Subtotals	29.4	78.3	31.1	37.5	73.1
<u>II. Goals related to minority groups</u>					
Establish black studies program	8.5	.2	.9	9.1	1.0
Increase racial equality or eliminate discrimination	7.1	.8	1.3	6.1	1.2
Improve minority group's rights, privileges or power	6.4	1.1	.8	6.2	1.2
Increase minority group's enrollment or representation on faculty	6.2	--	.3	7.2	.7
Protest dismissal of black worker from university	.5	--	3.0	.9	--
Protest disciplinary actions taken against black students	2.2	--	--	1.0	--
Better housing and scholarships for blacks	1.6	--	--	1.3	--
Miscellaneous goals related to minority groups	<u>2.0</u>	<u>.4</u>	<u>.4</u>	<u>1.5</u>	<u>1.0</u>
Subtotals	34.5	2.5	6.7	33.3	5.1

TABLE 16--Continued

Main Goals Attributed to Most Memorable Demonstration	Panel A (N = 1,036)			Panel B (N = 822)	
	Academic year			Academic year	
	68-69	69-70	70-71	68-69	69-70
<u>III. Goals related to student- administration relations</u>					
Obtain greater student power in hiring, firing, and tenure for faculty	5.7	2.6	.8	2.9	2.6
Obtain greater student participation in admin- istration of university	2.0	1.9	1.3	2.4	2.1
Change dormitory regulations (parietals, etc.)	4.6	.3	.6	3.2	.2
Protest policies of Board of Regents or trustees	.9	.4	3.8	1.0	.4
Protest speaker or visitor on campus	1.3	—	.7	2.3	—
Obtain academic reforms or changes in curriculum	1.3	.7	.5	.7	1.0
Establish new free univer- sity	1.7	.2	—	.2	—
Miscellaneous goals related to student-administration relations	<u>1.8</u>	<u>2.7</u>	<u>2.4</u>	<u>2.3</u>	<u>2.9</u>
Subtotals	19.3	8.8	10.1	15.0	9.2
<u>IV. Goals related to other issues</u>					
Protest of budget cuts or failure to obtain increased budgets	1.7	.5	.1	1.3	.1
Re-evaluation of drug laws	2.1	—	—	1.3	—
Burning of off-campus build- ings (e.g., Bank of America)	—	1.0	.1	—	1.0
Protest police or National Guard treatment of students or non-students	.9	.2	1.6	.4	.4
Miscellaneous other goals	<u>1.8</u>	<u>1.1</u>	<u>1.8</u>	<u>1.6</u>	<u>1.7</u>
Subtotals	6.2	2.8	3.6	4.1	3.2
Uncodeable response	2.9	4.4	4.8	4.3	5.7
No response	<u>7.7</u>	<u>3.2</u>	<u>43.7</u>	<u>8.6</u>	<u>3.7</u>
Totals	100.0	100.0	100.0	100.0	100.0

31 percent. Panel B exhibited a similar pattern of attributions concerning the goals of memorable demonstrations during the first two survey waves. The percentage of Panel A members attributing to demonstrations the specific goal of stopping the war rose from 3.4 on wave one to 53.7 on wave two, and then fell to 21.0 on wave three. On the first two waves the corresponding percentages for Panel B were similar (7.3 and 50.1).

Considering the demonstrations whose main goals were related to minority groups, the frequency of mention of these protests reached a high point on wave one, with about 34 percent of all panel members reporting such demonstrations, but then fell off sharply on waves two and three. On the initial survey the specific goal of establishing Black studies programs was mentioned more frequently than any other goal in this category (by about 9 percent of all panel members). However, on waves two and three less than one percent of the panel members mentioned protests related to such programs.

Finally, the frequency of occurrence of protests in the third category (those whose main goals were characterized so that they fell in the area of student-administration relations) was greatest on wave one, but was sharply diminished on waves two and three. During the academic year, 1968-69, student protests whose goals were to obtain greater student power in the hiring, firing, or granting of tenure of faculty members were the most frequent demonstrations in this category.

Participation of Respondents in Protest Subcultures. Table 17 shows that Panel A exhibited a strong non-linear curve of reported degree of participation in campus demonstrations over the three survey waves. For example, the percentages of Panel A reporting on waves one, two, and three that they had been "very active" or "moderately active" in such demonstrations were 16.5, 43.1, and 15.2, respectively. A similar pattern of response was exhibited when panel members were asked on each survey whether they had been active participants during the preceding year in "campus groups concerned with national or world issues (SDS, Vietnam Committee, Draft Committee, etc.)": for Panel A the percentages saying "Yes" were 8.8, 24.2, and 8.8 on waves one, two, and three, respectively. No other extra-curricular group on which panel members reported was associated with a comparably strong non-linear curve in reported participation.

Episodic Press of Student Colleagues and Teachers. The non-linear temporal trends we have just noted were also manifest in many of the press scale scores, particularly in scores on the student press scales loading highly on the Political Participation factor (Chapter II). Trend analyses of press scale scores were performed primarily on the data for Panel A, since data for all three survey waves were available for this panel.¹

¹In general Panel B exhibited trends similar to Panel A on waves one and two. Considering only the data from the first two waves, 2 X 2 analyses of variance (waves vs. panels) on each of the press scales revealed highly significant main effects ($p < .001$) for waves on every scale for which there were significant wave differences for Panel A alone (cf. col. 1, Table 18) but yielded evidence of a significant Wave X Panel interaction effect on only one of these scales (Scale 2).

TABLE 17

Reported Degree of Participation in Various Demonstrations
and Extracurricular Groups

Survey Question and Response	Percentage of panel making given response				
	Panel A (N = 1,036)			Panel B (N = 822)	
	1969	1970	1971	1969	1970
During the past year have you been active in civil rights, political and social action, or other demonstrations?					
"Yes, very active" or "Yes, moderately active"	16.5	43.1	15.2	14.1	35.3
In which of the following extracurricular groups have you been an active partici- pant during the past academic year (responses ordered by overall frequency of mention)?					
Fraternity	25.6	30.0	23.8	33.3	28.7
Pre-professional student association	5.3	8.7	13.4	22.5	24.0
Campus group concerned with national or world issues	8.8	24.2	8.8	6.9	19.6
Campus group concerned with local issues	13.7	15.8	9.6	11.6	13.8
Student government organi- zation	10.4	11.0	10.1	10.3	8.5
Campus group concerned with supporting an organized political party or a political candidate	11.7	8.6	5.6	11.9	10.6
Editorial staff or campus publications	5.0	6.4	6.2	5.7	5.6
Afro-American studies group	2.0	2.0	1.6	2.3	2.0
Miscellaneous other groups	29.5	22.4	24.8	25.8	21.2

Table 18 summarizes F-ratios for one-way analyses of variance for evaluating wave differences (col. 1) and for evaluating the linear and quadratic components of the observed trends (cols. 2 and 3, respectively). Scales of each type (faculty vs. student press scales) have been rank ordered in this table by the magnitude of the last F-ratio (col. 3) which may be considered as evaluating the significance of departures from linearity. For the present we shall consider only the seven scales on which the trends showed large departures from linearity (e.g., departures significant at the .005 level). Scales showing mainly linear trends are discussed in a later section of the chapter.

Figure 11 shows a plot of average press scores for each panel on Scales 11 and 15, the two press scales on which trends showed the most marked departures from linearity. The figure shows that perceived press for political participation and for prosocial concern reached a sharp peak on wave two, which roughly coincided with the peak in frequency of protest demonstrations related to the war (Table 16). The same pattern was exhibited in scores reflecting student press for student power and for reflectiveness (Figure 12).

Panel members generally interpreted the teachers they had known best during the preceding year as being unusually supportive during the rise in protest demonstrations on wave two. Figure 13 shows that scores on scale 5 (Faculty Press for Supportiveness) reached a similar peak on wave two, while scores on scale 8 (Student Press for Opposition to Faculty Influence) reached a low point on this wave.

Finally, Figure 14 summarizes the average scores on scale 12 (Student Press for Vocationalism) which exhibited a decided V-shaped trend for Panel A. These results suggest that many students were opposed to "business as usual" on the campus during the hectic days preceding the second survey wave.

Non-Episodic Influences upon Panel Members

It may be seen in Table 18 that there were four press scales (2, 6, 7, and 13) on which the trends of scores were mainly linear. The most marked wave differences were exhibited on the scales for assessing student press for estheticism and student press for affluence. Figure 15 shows that as panel members progressed through college their descriptions of the students they had known best and associated with most commonly indicated a steady rise in press for estheticism, but also a steady decline in press for affluence. For example, one of the items of the Student Press for Estheticism scale read, "They often went to concerts and art exhibits when they were available." The percentages of members of Panel A agreeing on waves one, two, and three that this statement was an apt description of their close associates were 34.5, 43.1, and 48.7, respectively. Accepting the reports of panel members at face value, it appears that students were increasingly exposed to student colleagues manifesting an appreciation of the fine or applied arts. Similarly, an indication of the magnitude of the decline in conventional values of

TABLE 18

Trend Analyses of Scores of Panel A on Faculty
and Student Press Scales

College Press Scale	F-Ratios for evaluating significance of		
	Differences between waves (df = 2/2070)	Linear component of trend (df = 1/2070)	Quadratic component of trend (df = 1/2070)
	(1)	(2)	(3)
<u>Faculty Press Scales</u>			
5 Supportiveness	17.42*	18.08*	16.76*
6 Affiliative	23.22*	37.81*	8.69
4 Humanities	4.78	4.25	5.29
3 Vocationalism	<1	<1	<1
1 Science	<1	<1	<1
2 Advanced training	35.14*	70.34*	<1
<u>Student Press Scales</u>			
11 Political Participa- tion	216.00*	33.22*	398.82*
15 Prosocial Concern	68.24*	10.38*	119.99*
17 Student Power	50.41*	49.11*	51.75*
10 Reflectiveness	25.76*	<1	51.13*
8 Opposition to Faculty Influence	18.19*	6.63	29.73*
12 Vocationalism	6.76*	<1	13.27*
13 Affluence	82.88*	156.99*	8.88
7 Estheticism	85.07*	161.80*	8.35
9 Playfulness	1.58	1.70	1.45
16 Advanced Training	1.94	3.43	<1
14 Science	<1	1.16	<1

* p = .002

* p < .001

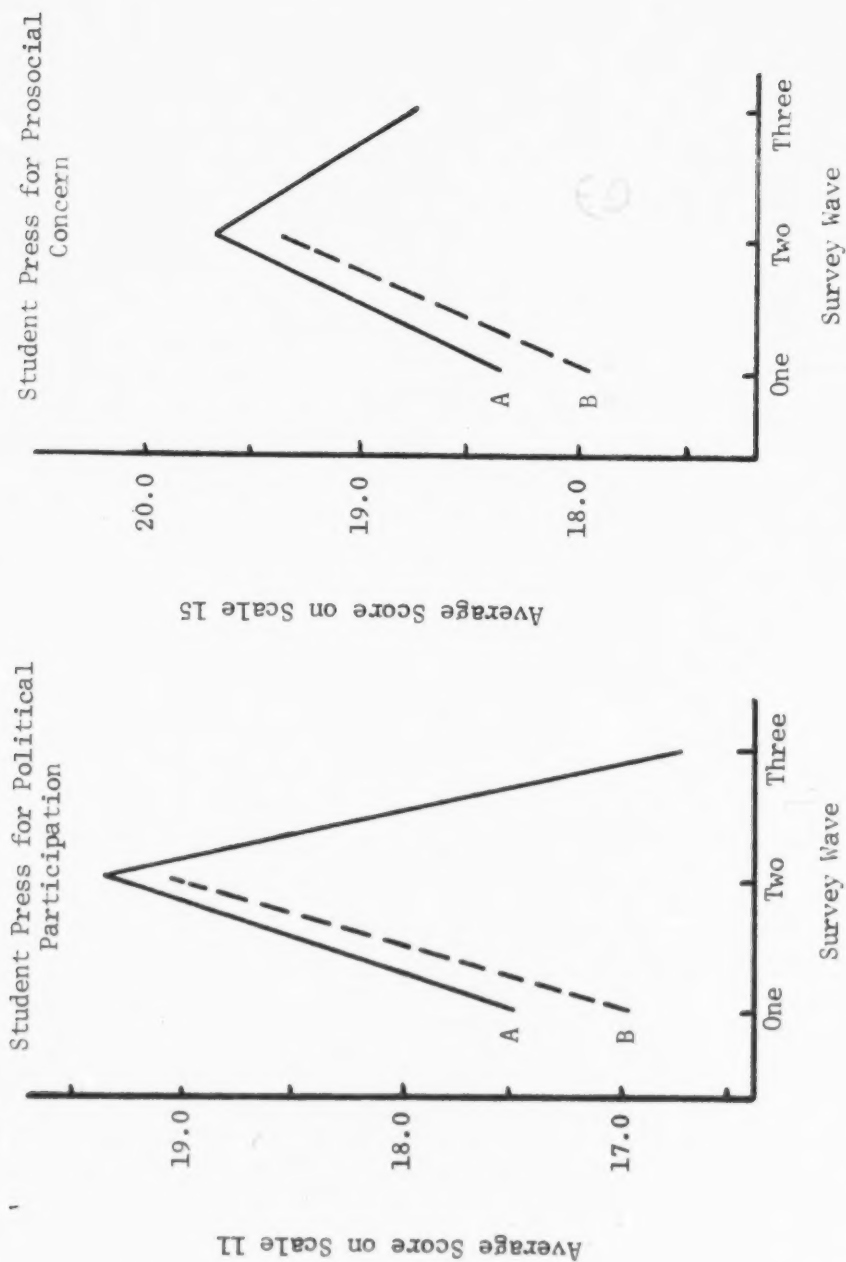


Figure 11 Average Scores of Panels A and B on the Student Press for Political Participation and on the Student Press for Prosocial Concern Scales

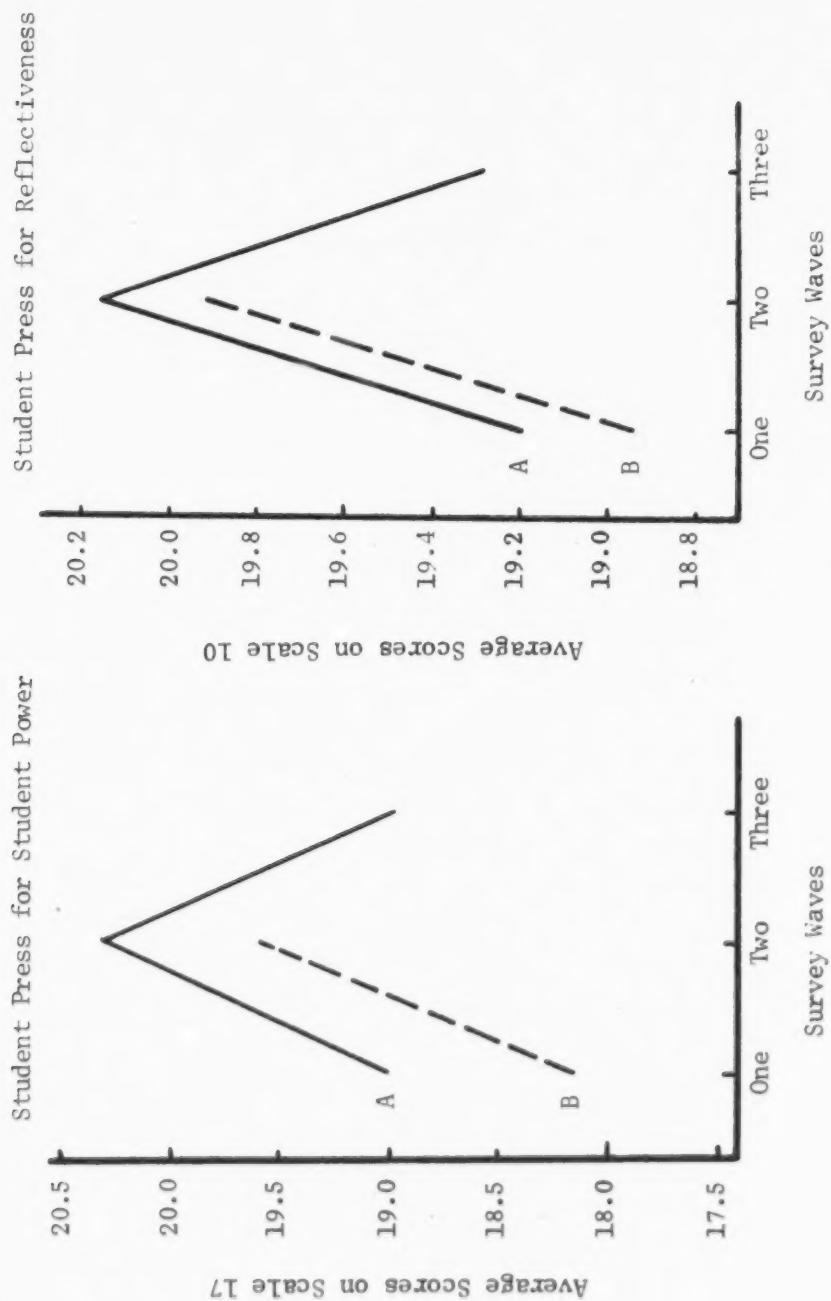


Figure 12 Average Scores of Panels A and B on the Student Press for Student Power and on the Student Press for Reflectiveness Scales

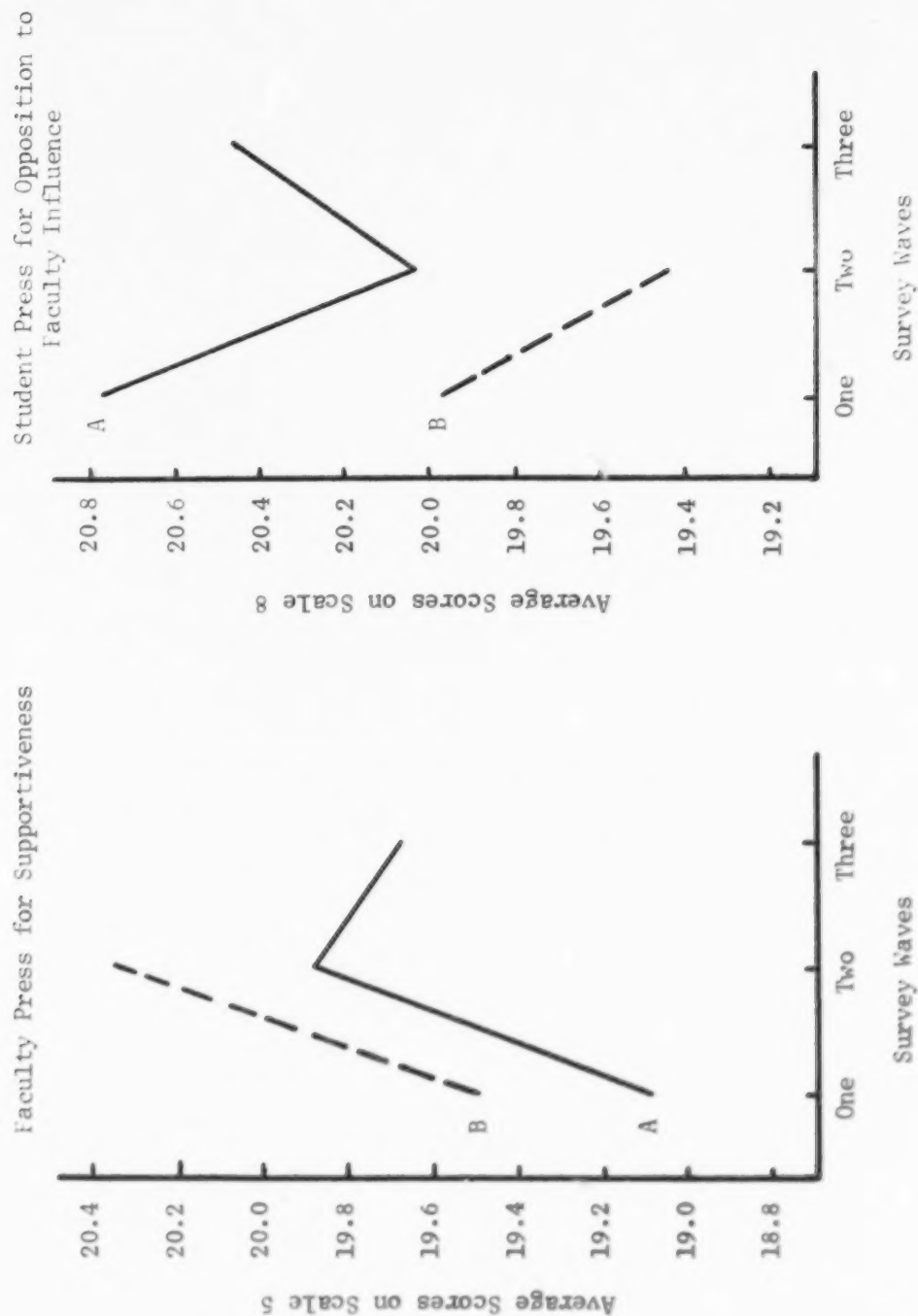


Figure 13 Average Scores of Panels A and B on the Faculty Press for Supportiveness and on the Student Press for Opposition to Faculty Influence Scales

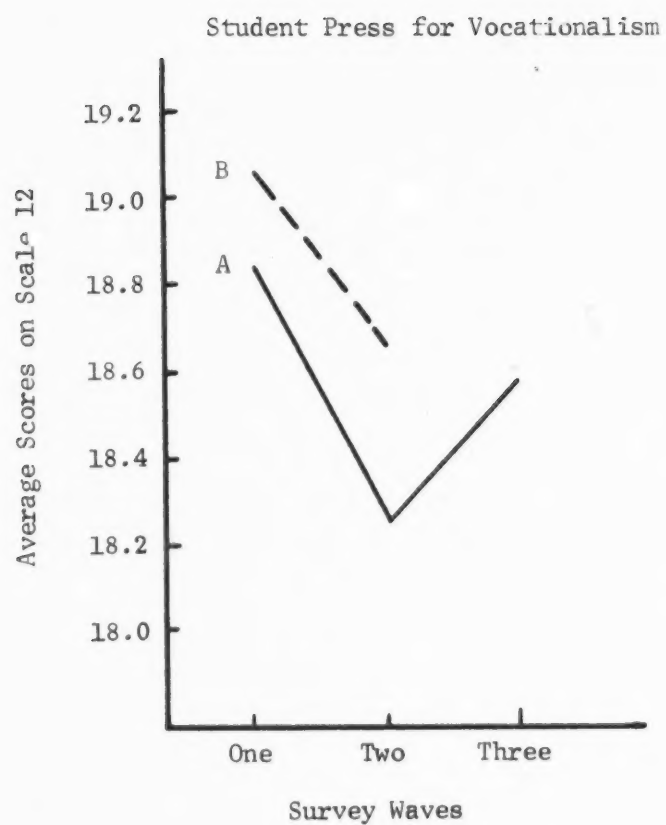


Figure 14 Average Scores of Panels A and B on the Student Press for Vocationalism Scale

Student Press for Affluence

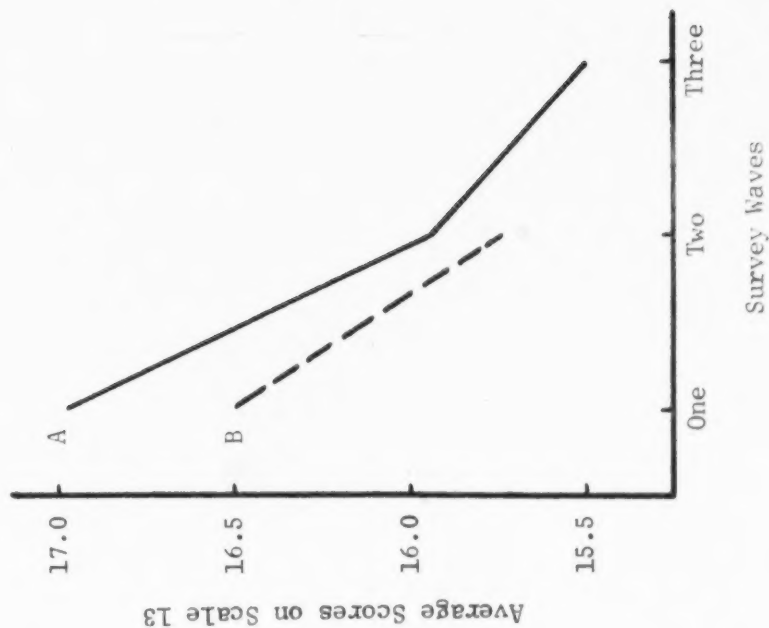
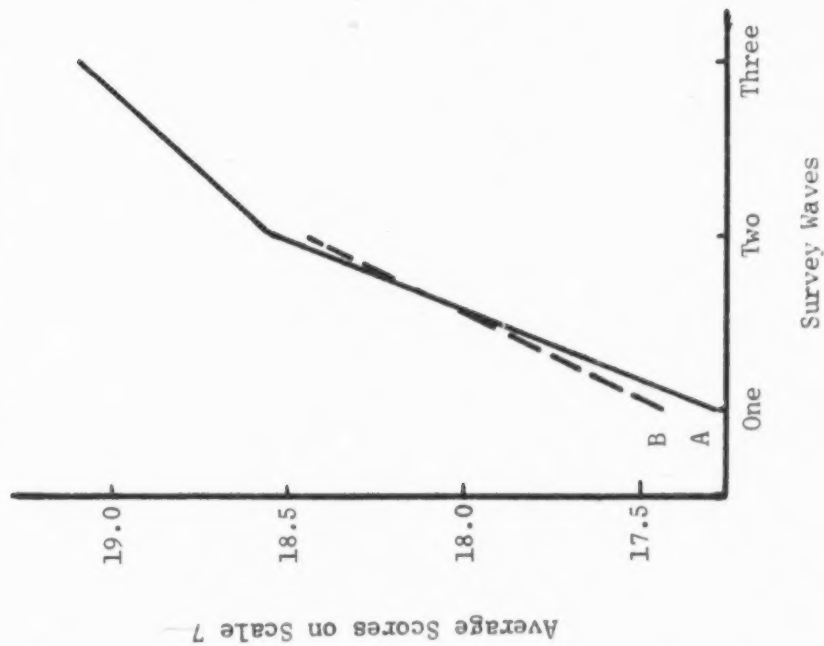


Figure 15 Average Scores of Panels A and B on the Student Press for Estheticism and on the Student Press for Affluence Scales

the respondents' colleagues may be obtained by comparing responses on successive survey waves to the following statement from the Student Press for Affluence scale: "Few of them ever expected to become wealthy." The percentages of Panel A members attributing such a non-acquisitive orientation to their close associates on waves one, two, and three were 20.6, 31.5, and 37.4, respectively.

Figure 16 shows a plot of the two linear trends found on faculty press scales. The left-hand portion indicates that panel members (and particularly Panel B members) described their teachers in ways suggesting a sharp increase in press for advanced training from earlier to later surveys. Similarly, the right-hand portion of this figure shows that as students progressed through college they increasingly characterized their teachers as friendly and interested in them.

To summarize the findings concerning potential influences external to the major field of study, we have seen that two broad types of potential stimulation can be distinguished. The first typically exhibited a non-linear temporal trend with maximal (or minimal) level of stimulation occurring at wave two. The second exhibited a linear trend with level of stimulation either an increasing or a decreasing function of number of previous survey waves. We turn now to the question of whether the attitudes expressed by panel members over the three waves show evidence of similar trends.

Trends in Attitudes of Panel Members over the Survey Waves

Trend analyses similar to those already described were performed on the data for each panel for each of the 16 attitude scales. The results are summarized in Table 19. While the attitude scales have been rank-ordered in this table by the magnitude of the F-ratio for evaluating the significance of the quadratic component of the trends for Panel A, it is apparent that the results for Panels A and B were very similar. For example, the trends exhibited on the highest-ranking eight scales in this table were associated with highly significant departures from linearity for each panel. We shall consider first those attitudes which seem most directly related to the climactic sequence of events consisting of the Cambodian incursion and the Kent State and Jackson State shootings.

Pacifism, Political Activity, and Civil Rights. Table 19 shows that for both panels the largest F-ratios for wave differences occurred on the Pacifism scale. While the trends for each panel on this scale showed highly significant departures from linearity, it is clear that the linear component in each case accounted for most of the variation due to differences associated with survey waves. Figure 17 shows a plot of the trends for each panel, and indicates that there was a very strong rise in pacifism during the period of the study. An indication of the magnitude of the shift in pacifistic attitudes among panel members is the variation in the percentage of Panel A members strongly or moderately agreeing with the statement, "It is contrary to my moral

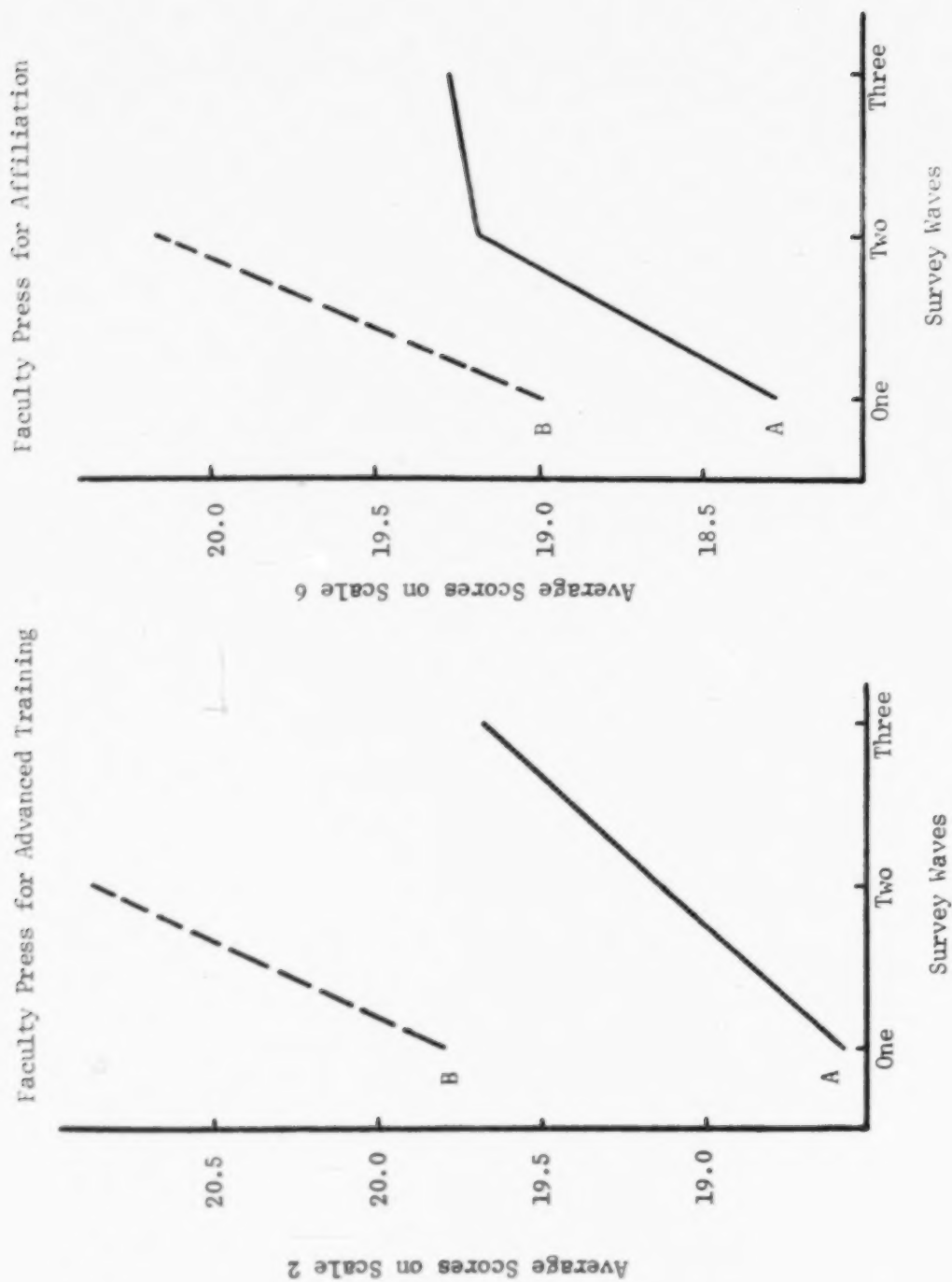


Figure 16 Average Scores of Panels A and B on the Faculty Press for Advanced Training and on the Faculty Press for Affiliation Scales

TABLE 19

Trend Analyses of Scores of Panels A and B on Attitude Scales

Attitude Scale	F-ratios for evaluating significance of					
	Panel A (N = 1,036)			Panel B (N = 822)		
	Wave dif- ferences df=2/2070	Linear component of trend df=1/2070	Quadratic component of trend df=1/2070	Wave dif- ferences df=2/1642	Linear component of trend df=1/1642	Quadratic component of trend df=1/1642
29 Political Activity	55.27*	7.39	103.19*	41.80*	18.60*	65.08*
18 Practical Orient.	30.99*	<1	61.98*	33.16*	16.17*	50.19*
23 Pacifism	260.48*	478.60*	42.49*	136.64*	240.15*	33.04*
24 Prosocial Orient.	19.15*	3.66	34.62*	8.97*	5.21	12.76*
26 Anomia	49.02*	73.04*	25.04*	37.32*	40.09*	34.58*
19 Science Orient.	13.36*	1.92	24.73*	11.31*	1.32	21.25*
31 Affluent Job Orient.	38.08	56.68*	19.45*	11.09*	10.85*	11.23*
28 Civil Rights	23.91*	32.22*	15.65*	37.38*	52.35*	22.38*
30 Prosocial Job Orient.	2.25	<1	4.36	4.82	7.79	1.80
32 Intellectual Job Orient.	5.85†	7.68	4.04	<1	<1	<1
25 Internationalism	22.96*	44.22*	1.72	7.81*	8.52†	7.05
21 Esthetic Orient.	104.11*	206.57*	1.53	50.64*	100.76*	<1
27 Conservatism	6.57†	11.66*	1.49	10.48*	9.47†	11.47*
22 Domestic Social Welfare	5.40†	9.80†	<1	11.31*	22.47*	<1
20 Free Speech	30.96*	61.93*	<1	35.01*	69.16*	<1
33 Individualistic Job Orient.	<1	<1	<1	<1	<1	<1

† $p < .005$ * $p < .001$

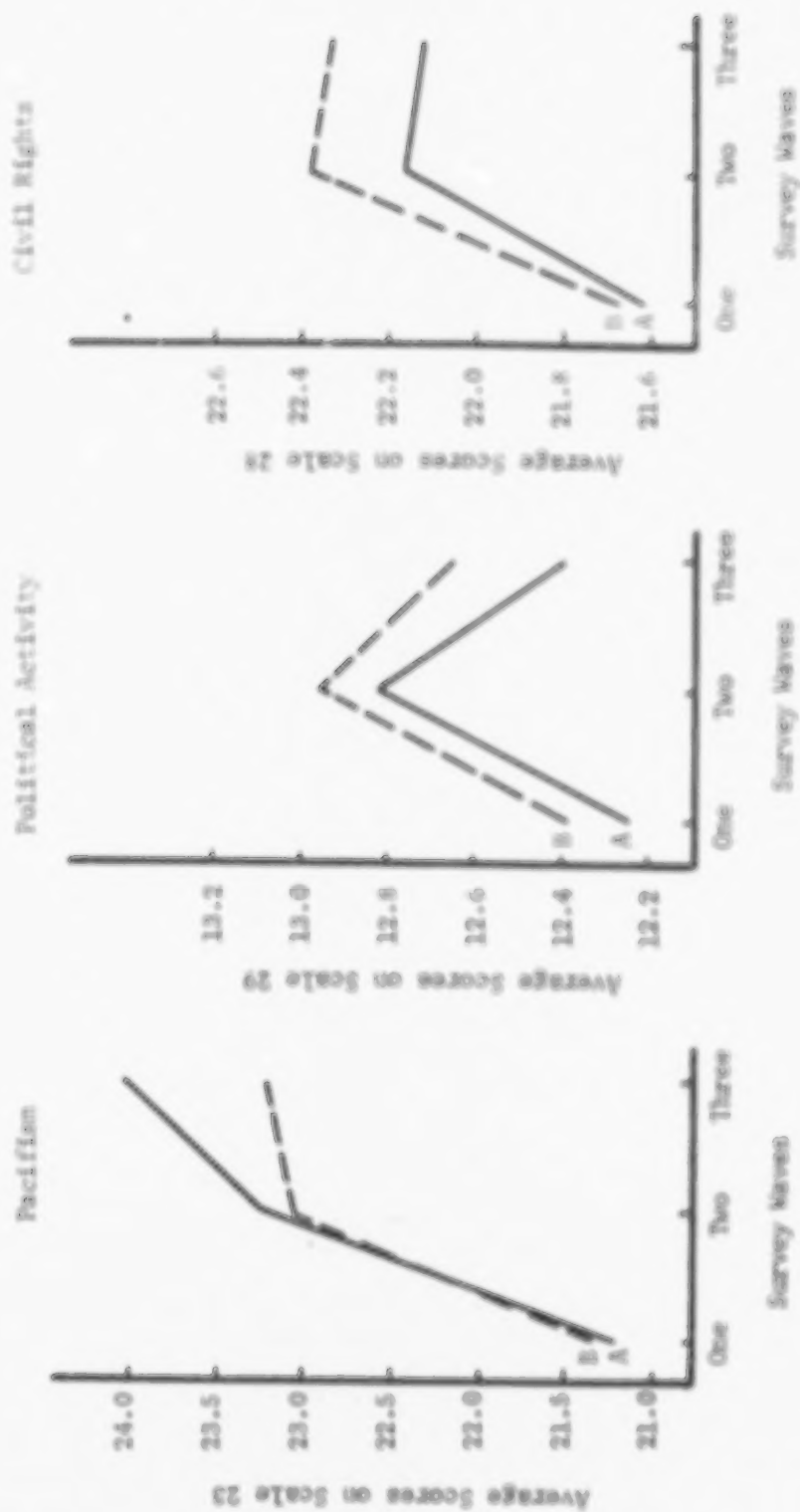


Figure 17 Average Scores on Panels A and B on the Pacifism, Political Activity, and Civil Rights Scales

principles to participate in war and the killing of other people." The percentages expressing agreement with this statement on waves one, two, and three were 41.6, 57.8, and 71.9, respectively—an increment of more than 30 percent from the initial to the final survey.

If we attribute this sharp rise in pacifism to the protest demonstrations documented in Table 15, then how do we account for the increment in pacifism from wave two to wave three (when the frequency of war protests was diminishing)? It seems that such protest demonstrations can best be conceptualized as contributing a triggering effect. However, other bases must be entailed in view of the sustained elevations of pacifism on wave three. Whatever the causes for the elevations in pacifism from wave two to wave three, they appear to have been less effective among Panel B members. For example, a 2 x 3 analysis of variance (panels vs. waves) indicated that there was a significant Panel x Wave interaction effect ($F = 7.94, p < .001$), and Figure 17 shows that on wave three older students (Panel B) were less successfully persuaded to adopt pacifistic positions than were younger students (Panel A).

In considering the political activity of panel members it is important to distinguish between those activities associated with organized political parties and those associated with more informal associations. We have already seen in Table 17 that panel members were asked on each wave to indicate whether they had been active participants in "campus groups concerned with supporting an organized political party or a political candidate." Responses to this question suggested a decreasing, and fairly linear, level of involvement over the survey waves. However, the overall responses to the six items comprising the Political Activity Index indicated a decidedly different temporal trend. Table 19 shows that the trends of scores of both panels on this index had very marked departures from linearity. Figure 17 shows a plot of the average scores of each panel, and it can be seen that students reported their peak levels of political activity on wave two, but reported marked diminution in such activity on wave three. It may be noted that the trends for scores on the index are similar to the trends for reported student press for political participation (Figure 11). An examination of changes on individual items comprising the Political Activity Index indicates that the peak of political activity observed on wave two was primarily attributable to a change in frequency of responses to three of the six items on the index: on wave two more panel members reported that they had frequently discussed political and social issues with friends, that they had frequently written their Congressman or Senator to let them know how they felt on a public issue, and that they had frequently attended meetings at which political speeches were made. In short, the large increase in political activity on wave two indicated by responses to scale 29 was chiefly due to increased informal political activity and not to increased support for a political party or candidate for political office.

The Jackson State shootings on May 14, 1970, occurred late in the school year and in close proximity to the Kent State (May 4) and Cambodian incursion (April 30). Probably the lateness of the event and its contiguity with other events having somewhat different thrusts are the

main reasons that there were no increments for either panel on wave two in the frequency of protests specifically related to minority groups (Table 16). Nonetheless, it seems reasonable to assume that the Jackson State shootings may have elicited a renewed interest in the civil rights of minorities. Consistent with this hypothesis were the trends shown in Figure 17, which indicate that scores on the Civil Rights scale reached their peak on wave two, then declined slightly on wave three. Beyond this, a comparison of the trends for Civil Rights scores and for the frequency of protests related to minority groups suggests the limited efficacy of such protests in producing attitude change in the university's student community. For example, Table 16 indicates that protests related to minority groups were the most frequently reported type of demonstration on wave one, with such protests being recalled as the most memorable by one third of all panel members. Nonetheless, Figure 17 suggests that these protests had virtually no impact upon the civil rights attitudes of panel members, for on wave one (at the very time such protests were at their peak) the civil rights scores of panel members were at their lowest level.

Alienation, Prosocial Orientations, and Internationalism. The t-ratios for wave differences on the Anomia scale were unusually large (Table 19), and the trends for the scores for each panel on this scale exhibited marked departures from linearity. A perusal of the items comprising the Anomia scale in Appendix A indicates that high scores on this scale are associated with alienation, cynicism, or despair concerning the future of society. Figure 18 shows that both panels exhibited an increase in average scores from wave one to wave two, with scores dropping slightly on wave three. The most characteristic item of this scale read, "In spite of what some people say, the lot of the average man is getting worse, not better." The percentages of panel A members strongly or moderately agreeing with this statement on waves one, two, and three were 24.6, 32.1, and 33.8, respectively. The corresponding percentages for panel B members were 18.7, 29.1, and 30.0.

While an increasing proportion of panel members expressed such despair from wave one to wave two, an increasing proportion also expressed prosocial orientations. The non-linear trends for scores on the Prosocial Orientation scale are also shown in Figure 18, and each panel clearly exhibited a "peaking" which mirrored the trend in average scores on the Student Press for Prosocial Concern scale (Figure 11). The most characteristic item on the Prosocial Orientation scale read, "I plan to be active in the cause of eliminating poverty and ghettos." The percentages of panel A members strongly or moderately agreeing with this statement on waves one, two, and three were 35.6, 40.0, and 31.2; the corresponding percentages for panel B members were 33.6, 34.2, and 30.7 respectively.

The middle and far right hand trends shown in Figure 18 present an apparent anomaly: while the favorableness of attitudes towards internationalism was declining the prosocial orientations of panel members were becoming stronger on the average. An examination of the items comprising the Internationalism scale, however, indicates that two of the

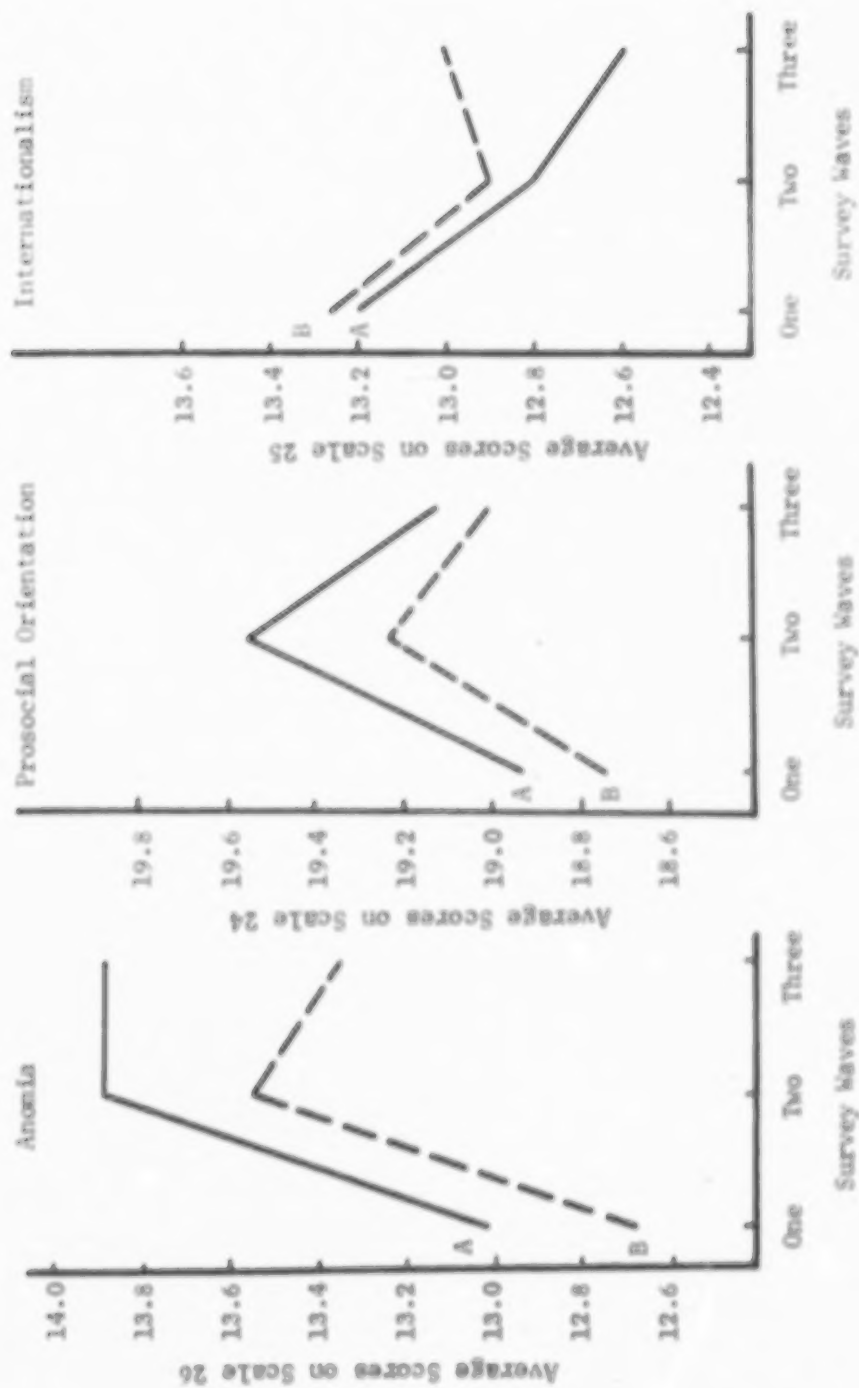


Figure 18 Average Scores of Panels A and B on the Anomia, Prosocial Orientation, and Internationalism Scales

four items in this scale mentioned sending help or soldiers to other countries primarily as a means of opposing Communism. It is clear therefore that panel members were not responding on the Internationalism scale solely to questions concerning willingness to send aid to underdeveloped nations. A 3 X 3 analysis of variance indicated a significant Panel X Wave interaction effect on the Internationalism scale ($F = 3.40$, $p < .05$); Figure 18 shows that Panel B exhibited a slight increase in scores from wave two to wave three. The latter interaction appears to be highly consonant with the interaction previously noted on the Pacifism scale (Figure 17).

Scientific, Practical, and Esthetic Orientations. As we saw in Chapter III, differential accentuation of initial major field differences was expected primarily on the scientific, practical, and esthetic orientations of panel members. It was suggested that one possible explanation for the failure to confirm the predicted effects of major fields upon these attitudes may be that competing college-wide or societal influences simply over-powered the distinctive influences of major fields of study. Figure 19 shows that the non-linear trends for Science and Practical Orientations (Table 19) exhibited a decided V-shape for each panel. It seems that the events immediately preceding wave two precluded "business as usual" for many students, and may well have countered the specialization of attitudes expected from differential exposure to major fields of study. On the other hand, the wave of dissent and disruption associated with Cambodia was definitely short-lived, and Figure 19 shows that on wave three science and practical orientations generally reached the average levels of strength observed on the initial survey wave. While the failure to find greater accentuation effects for Panel A than for Panel B upon Science and Practical Orientations may be attributed to competing influences operative on wave two, this explanation does not appear to provide a plausible account of the negative results on wave three (when such influences were operative at a sharply reduced level). Thus, we are compelled to consider more seriously the alternative that varied exposures to major fields of study do not greatly affect the science or practical orientations of students.

In contrast, it appears that the failure to confirm the expected greater accentuation for Panel A of initial major field differences in esthetic orientations can be attributed to the pervasiveness of press for estheticism in the larger university communities of panel members. It will be recalled that scores on the Student Press for Estheticism scale exhibited mainly a linear trend over survey waves (Table 18). Table 19 shows that scores on the Esthetic Orientation scale also exhibited strong linear trends for each panel. In figure 19 it can be seen that the rate of increase in strength of esthetic orientations was somewhat greater for Panel A than for Panel B; a 3 X 3 analysis of variance of these scores yielded a significant Panel X Wave interaction effect ($F = 5.74$, $p < .01$). An indication of the magnitude of the changes occurring over survey waves is found in the responses to the following item from the Esthetic Orientation Scale, "I don't care much for going

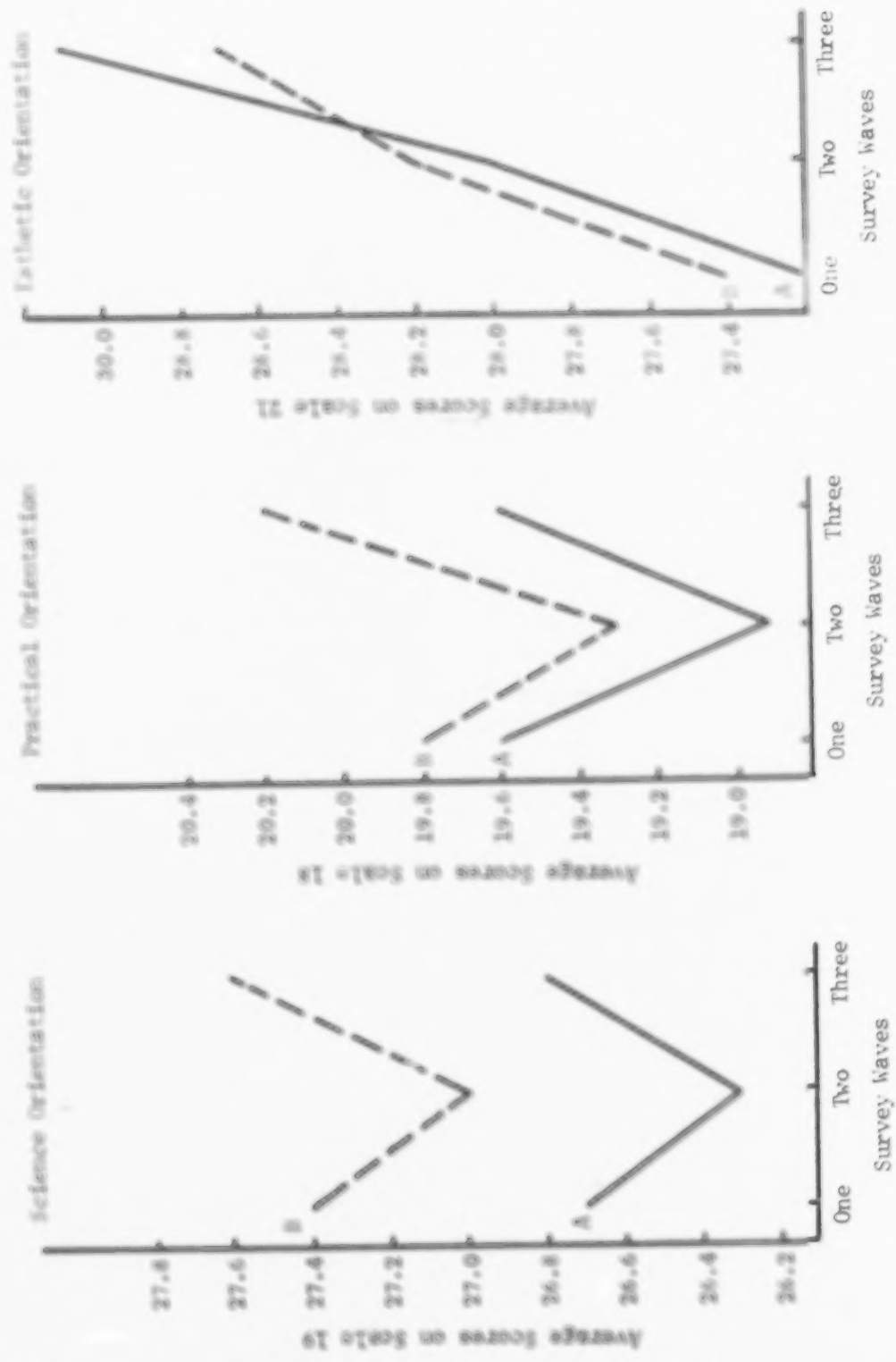


Figure 19 Average Scores of Panels A and B on the Science, Practical, and Aesthetic Orientation Scales

to art galleries and looking at collections of sculpture and paintings." The percentages of Panel A disagreeing strongly or moderately with this statement on waves one, two, and three were 50.3, 65.9, and 72.8, respectively. The corresponding percentages for Panel B were 60.7, 65.0, and 69.8.

Civil Liberties, and Political and Economic Liberalism. Numerous studies summarized by Feldman and Newcomb (1969) suggest that the average student acquires more liberal attitudes as he progresses through college, and the results of the present study are generally consistent with this interpretation. We saw in Chapter II that five of the attitude scales (Scales 23, 28, 20, 22, and 27) had their highest loadings on a factor identified as a Liberalism factor. We have already discussed the rising, linear trends of scores on the Pacifism scale, and the non-linear trends (with "peaking" on wave two) of scores on the Civil Rights scale. Figure 20 shows the trends observed on the remaining three scales loading highly on the Liberalism factor. Of these, the trends on the Free Speech scale (Scale 20) yielded the most marked wave differences, with each panel exhibiting decidedly linear trends having their highest levels on wave three. Scores on the Domestic Social Welfare scale revealed similar, though less marked, increments in average scores over the survey years.

Figure 20 indicates that the scores of Panel A members on the Conservatism scale (a scale called by its authors "Ideological Agreement with Goldwater") exhibited a fairly linear decline over the survey years, while scores for Panel B members showed an increase from wave one to wave two followed by a slight decrease on wave three. It is instructive to examine several individual items on this scale because they pose interpretative difficulties. For example, when asked to express their agreement or disagreement with the statement, "In the past 25 years the country has moved dangerously close to Socialism," many respondents expressed agreement but crossed out the word "dangerous" or added other comments indicating that they heartily approved of the movement toward Socialism. Since no attempt was made to take account of such item editing in the scoring of responses, scores on this item were of dubious validity. A second item in this scale was ambiguous because it asked two questions simultaneously: "Do you feel that the U.S. is losing power in the world or is it becoming more powerful, and if losing power how much does this disturb you?" The most popular fixed alternative to this question read, "Losing power and disturbed very little." The percentages of Panel A members endorsing this alternative on waves one, two, and three, were 24.6, 38.3, and 44.9, respectively (for Panel B members the corresponding percentages were 25.3, 32, and 41.4). Finally, the responses to a third item were probably indicative of discontent with bureaucracy than they were of economic conservatism. For example, respondents were asked how they felt about the statement, "The Federal government is gradually taking away our basic freedoms." The percentages of Panel A members agreeing with this statement on waves one, two, and three were 44.1, 55.6, and 60.9, respectively, while the corresponding percentages for Panel B members were 40.0, 51.1,

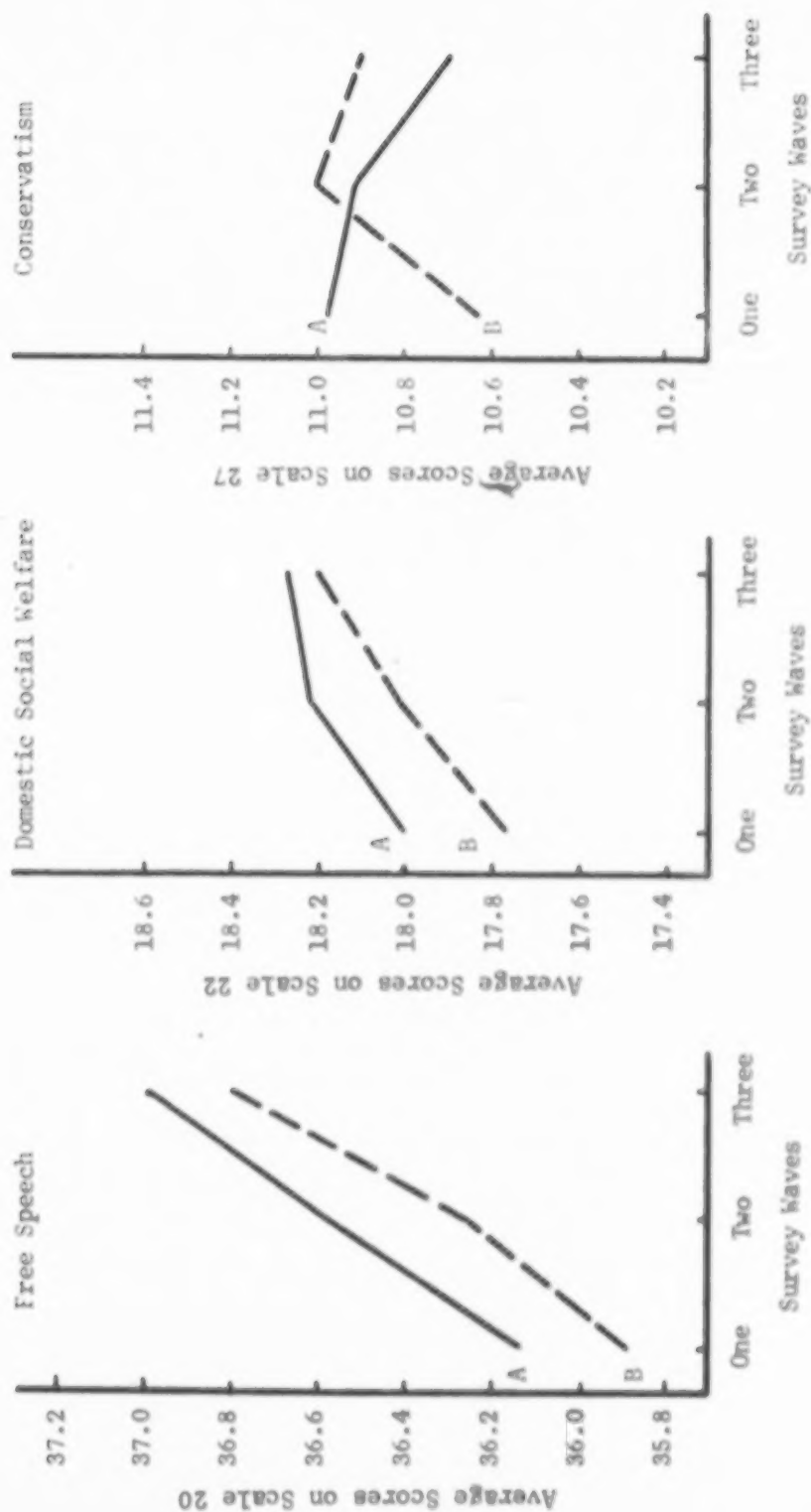


Figure 20 Average Scores of Panels A and B on the Free Speech, Domestic Social Welfare and Conservatism Scales

and 53.0, respectively. The latter item had the lowest item vs. total scale score correlation among the five items on the scale, indicating that it had relatively little in common with other items in the scale (cf. Appendix A).

Affluent Job Orientations. Table 19 indicates that the Affluent Job Orientation scale was the only job orientation scale on which there were sizeable wave differences. Figure 21 shows that Panel A exhibited a moderately abrupt decline in average scores from wave one to wave two, followed by a leveling off of scores on wave three. The trend for Panel B showed a similar pattern. The most characteristic job requirement on this scale was, "Provide me with a chance to earn a great deal of money." The percentages of Panel A members rating this job requirement as highly or moderately important on waves one, two, and three were 70.6, 61.0, and 59.8, respectively; the corresponding percentages for Panel B members were 69.1, 62.3, and 65.9, respectively. The higher overall elevation of the average scores for Panel B shown in Figure 21 was mainly attributable to the greater importance assigned by Panel B members to the job requirement of "Give me social status and prestige." The trends on this scale seem partly attributable to a reluctance on the part of some students to pursue "business as usual" in June, 1970, as suggested above in the discussion of the trends found for scores on the Science and Practical Orientation scales. Beyond this, the tendency for affluent job orientations of Panel A members to remain at moderately low levels on wave three may be partly attributable to the nonacquisitive norms modeled by peers, as suggested by the decline from wave two to wave three in student press for affluence (Figure 15).

Accentuation, Minimization, and External Events

Finally, we turn to a consideration of the implications of these findings for the major aims of the study. As we have already seen, two questions suggested by Feldman and Newcomb (1969) concern the conditions under which accentuation or minimization patterns of change occur: First, does accentuation of initial major field differences occur only, or primarily, in the absence of strong college-wide or societal influences? Second, is there any evidence that minimization of initial major field differences is itself a symptom of the operation of influences external to the major field of study? If analyses indicate that these questions should be answered affirmatively then the paucity of major field effects upon the attitudes of panel members can perhaps be attributed directly to events or influences external to the major field of study.

A crude index of the impact of external events upon both panels of subjects consists in the degree to which scores of subjects vary across survey waves. For scores on each college press scale a 2 X 2 analysis of variance (panels vs. waves) was performed, and the F-ratio for the main effect associated with the first two survey waves was used to order press scales in Table 20 with respect to variation over waves. For scores on each attitude scale a 2 X 3 analysis of variance (panels vs. waves) was performed, and the F-ratio for the main effects associated with the

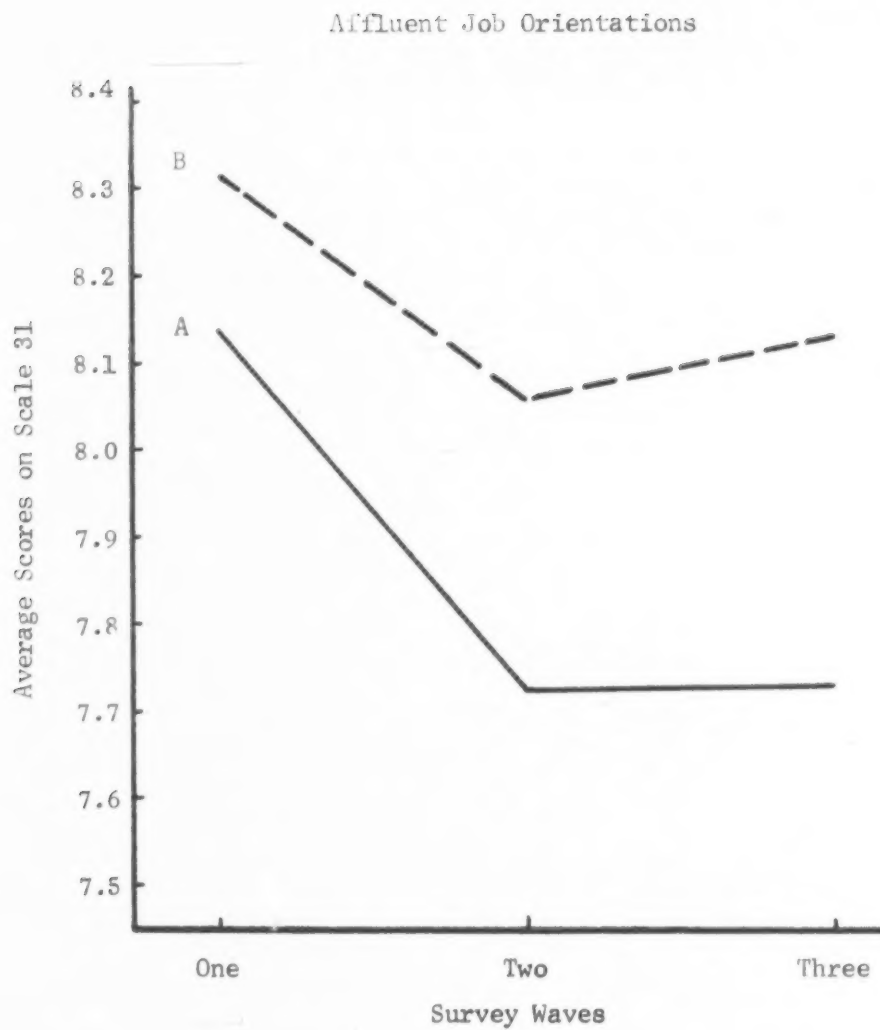


Figure 21 Average Scores of Panels A and B on the Affluent Job Orientation Scale

three survey waves was used to order attitude scales in Table 21 with respect to variation over waves.

If differential accentuation of initial major field differences tends to occur only on scales showing relatively little evidence of influence by external events, then we should find accentuation patterns only on scales ranking toward the bottom of each table. However, in Table 20 we find two high-ranking scales (Student Press for Political Participation and Student Press for Estheticism) and in Table 21 we find one high-ranking scale (Political Activity Index) which exhibited some evidence of differential accentuation. It is true that each of the scales on which we found the most marked differential accentuation of initial major field differences (Faculty Press for Science, Student Press for Science, and Faculty Press for Humanities) ranked toward the bottom of Table 20. Nonetheless, it appears that accentuation of initial major field differences was not confined to attributes on which there seemed to be an absence of competing college-wide or societal influences.

If minimization of initial major field differences is a symptom of competing external influences, then it follows that the minimization pattern should be found primarily on scales ranking toward the top of Table 20 and of Table 21. However, these tables clearly show that the minimization pattern occurred on scales exhibiting small as well as large differences across survey waves. Therefore, the answers to our two initial questions appear to be negative.

The single attitude scale showing evidence of differential accentuation of initial major field differences (over the one-year interval) was the Political Activity Index (Table 21). The most directly related student press scale (Student Press for Political Participation) correspondingly showed evidence of differential accentuation of initial major field differences during the same interval (Table 20). On wave two the correlation between average scores on these two scales, for the nine major field groups in Panel A, was $+0.86$, with Social Science majors having the highest average scores on both scales and Engineering majors having the lowest average scores on each scale.

It may be noted that Table 20 shows considerable evidence of differential accentuation, indicating as we have already noted that there were ecological effects associated with entering varied major fields of study. In contrast, Table 21 shows virtually no evidence of differential accentuation but expectedly exhibits considerable evidence of minimization of initial major field differences for each panel. The latter pattern suggests that for some reason attitudinal differences between students in various fields of study tended to diminish as students progressed through college. Possibly the frequency of occurrence of the minimization pattern is related to the rising tide of protests and demonstrations already amply documented in this chapter. If so, we must again conceptualize some basis for continued minimization of major field differences, for the minimization pattern was as frequent for changes over the two-year interval as it was for changes over the one-year interval.

TABLE 20

Accentuation and Minimization Indices and Differences
in Average Scores on Press Scales over Survey Waves

Press Scale	F-ratio for wave main effect in 2 X 2 ANOVA (df = 1/1856)	Pattern of change (one- year interval)	
		Panel A	Panel B
11 Political Participation (SP)	424.71	A (?)	---
15 Prosocial Concern (SP)	249.93	---	M
17 Student Power (SP)	189.23	---	M
7 Estheticism (SP)	125.11	A (?)	---
13 Affluence (SP)	123.07	---	---
10 Reflectiveness (SP)	84.79	---	---
6 Affiliation (FP)	82.14	---	---
5 Supportiveness (FP)	70.13	---	---
2 Advanced Training (FP)	68.82	---	---
8 Opposition to Faculty Influence (SP)	54.47	---	---
4 Humanities (FP)	24.08	A	---
12 Vocationalism (SP)	23.29	A	---
9 Playfulness (SP)	2.76	A	M
16 Advanced Training (SP)	1.78	---	M
3 Vocationalism (FP)	1	A	A
1 Science (FP)	1	A	---
14 Science (SP)	1	A	---

TABLE 21

Accentuation and Minimization Indices and Differences
in Average Scores on Attitude Scales over Survey Waves

Attitude Scale	F-ratio for wave main effect in 2 X 3 ANOVA (df = 2/3712)	Pattern of change over					
		One-year int.		Two-year int.			
		Panel A	Panel B	Panel A	Panel B	Panel A	Panel B
23 Pacifism	393.07	M	--	--	--	M	M
21 Esthetic Orientation	152.17	--	M	M	--	--	--
29 Political Activity	95.48	A	--	--	--	--	--
26 Anomia	85.20	--	--	--	--	--	--
20 Free Speech	63.48	--	--	--	--	M	M
18 Practical Orientation	58.86	M	--	--	--	M	M
28 Civil Rights	57.97	--	--	--	--	--	--
31 Affluent Job Orientation	46.42	--	--	--	--	M	M
25 Internationalism	28.87	--	--	--	--	--	--
24 Prosocial Orientation	27.27	--	--	--	--	--	--
19 Science Orientation	22.82	M	M	M	M	M	M
22 Domestic Social Welfare	15.19	M	M	--	--	--	--
30 Prosocial Job Orientation	5.17	--	--	--	--	--	--
27 Conservatism	5.03	--	--	--	--	--	--
32 Intellectual Job Orientation	4.09	M	--	--	--	M	--
33 Individualistic Job Orientation	1	--	--	--	--	--	--

With respect to the main hypotheses concerning the effects of major fields upon science, practical, and esthetic orientations, the data considered here may be interpreted as partly negating and partly supporting the view that the effects of external events precluded accentuation of initial major field differences. The most negative evidence was for the science and practical orientations of panel members. It was not so much that external events exercised continuous and competing influences, but that exposures to major fields of study seemed to be relatively impotent in changing such attitudes. While the absence of the accentuation pattern in science and practical orientations on wave two can be attributed to the peaking of protests and of prosocial concerns, the absence of this pattern on wave three (during an academic year characterized by unusual quietude) cannot easily be attributed to such external influences. We are not able to rule out the possibility that the paucity of effects upon these attitudes may have been the results of conditions internal to major fields of study. Perhaps many faculty members experienced a sense of despair and manifested an incapacity to carry out their duties during the period of this study. It would be hard to find a time when universities and academic departments were more divided and preoccupied by events in the larger society. The failure to find evidence that teachers (particularly those in the natural and behavioral sciences) had typically served as role models exemplifying the distinctive traditions of their academic disciplines might then be the consequence of a malaise which rendered them temporarily ineffectual in changing the attitudes of students.

In contrast, the failure to confirm the predicted effects of major fields upon esthetic orientations does not seem as clearly attributable to the weakness of major field influences. Perhaps the difficulty was traceable to an excess of environmental consistency: as we have seen, there was a strong, linear increase over survey waves in press for estheticism. Thus it may be argued that conditions were unfavorable for detection of the differential effects upon esthetic orientations resulting from specialization in the fine arts or humanities.

CHAPTER V

SUMMARY AND IMPLICATIONS

The major objective of this study was to investigate the ecological and attitudinal effects of varied exposures to university subcultures. In this final chapter the main findings will be summarized, and we shall consider their implications for interpreting previously reported patterns of attitude change among college students.

Background

The potential effects of exposure to major fields of study have been most provocatively characterized by C. P. Snow (1959, 1963), who lamented what he considered to be the dangerous and growing polarization of natural scientists and literary intellectuals. Feldman and Newcomb's (1969) description of a pattern of change, called accentuation of initial major field differences, bears a strong resemblance to the progressive differentiation between the two cultures described by Snow. Thus, the accentuation pattern of change in values attributed by these investigators to Huntley's (1965) panel of college students was mainly that of a fan-spread trajectory: initial differences in values between students in various fields of study were said not only to persist but to become exaggerated with increased specialization in the major field.

In discussing interpretative difficulties in previous studies which have suggested such an accentuation pattern, Feldman and Newcomb observed that an important limitation is that "these studies do not distinguish between those students who start and remain in a given curriculum and those students who change from their initial curriculum" (1969, p. 372). As a consequence, previous studies which have suggested that accentuation of initial major field differences in values occurs during the undergraduate years are ambiguous. We do not know whether exposures to major fields of study cause such an accentuation of major field differences, or whether students initially high in a given value simply tend to be recruited (during college) into fields of study having students and teachers who also tend to be high in that value. In order to avoid this interpretative ambiguity the present study sought to compare major field groups consisting of students who started and remained within given broad fields of study during an initial and a subsequent measurement occasion (e.g., students changing from one broad field to another during this interval were classified in a residual, miscellaneous category).

Procedures

Data collection procedures were planned to provide multiple time-series comparisons (Campbell and Stanley, 1963) over a survey period of approximately two years: during this period one panel of students (A) was expected to experience increasing exposure to teachers

and peers in the major field of study, while a second panel (B) was expected to experience a fairly steady (or even diminishing) degree of exposure to teachers and students in the major field. Thus mail surveys were sent during three successive summers to panels at two different stages of undergraduate study. At the time of the initial survey (June, 1969) one panel (A) had completed the freshman year, while the other panel (B) had completed the junior year. In selecting panel members the names of male students were randomly drawn from college directories at 25 universities having opening enrollments of at least 5,000 students in Fall, 1968. The distribution of the selected universities roughly matched the population of universities (having enrollments of this size) both with respect to geographical location and type of control (public vs. private). Designated samples for survey waves two and three included only panel members returning a completed questionnaire on the previous year's survey, and the percentages of each year's designated samples returning such questionnaires on waves one, two, and three were 36.3, 77.5, and 85.3, respectively. Analyses were based only upon the responses of the 1,036 Panel A members and of the 822 Panel B members who completed all three survey waves.

Panel members reported the proportion of credit-hours earned in the major field on each survey wave; as expected, Panel A members tended to take increasingly larger proportions of their credit-hours in their respective major fields over the three waves, while Panel B members exhibited a relatively constant level of exposure over the two initial waves. Four out of every ten Panel B members reported on the final wave that they had not attended school during the 1970-71 academic year, and of those who did seek post-graduate training only about six out of every ten reported that their graduate or professional curriculum was directly related to their undergraduate major field. In sum, differential exposure to major fields over survey waves was clearly manifest: on the average increments in exposure to the major field were markedly greater over survey waves for Panel A than for Panel B. If exposure to varied major fields of study causes accentuation of initial major field differences on the attributes measured, then it follows that a more marked accentuation pattern on these attributes should have been observable for Panel A than for Panel B.

A large proportion of the items in the survey questionnaires remained fixed from one survey to the next, and the fixed portion of each mail questionnaire included 33 multi-item scales: 6 faculty press scales, 11 student press scales, and 16 attitude scales. Items in each faculty press scale asked panel members to describe the teachers they had known best during the preceding year. Similarly, items in each student press scale asked panel members to describe student colleagues known best during the preceding year. Items from different scales were typically presented in scrambled order on the survey questionnaires in an effort to disguise the specific scales the items were designed to assess.

Effects of Exposures to Major Fields of Study

Scores on the college press scales were derived from ratings of the applicability of descriptive statements concerning the attitudes, values, and activities of teachers and student colleagues known best during the year, and thus may be interpreted as indicants of the kinds of subcultures to which majors in various fields were exposed. Thus the act of majoring in a given field may be viewed as an act having certain ecological consequences--for example, the academic environments of the humanities major and of the engineering or physical science major were described in increasingly different ways by Panel A on later survey waves. In general, there was ample evidence of the ecological effects of entering major fields of study (greater accentuations of initial major field differences for Panel A than for Panel B), but little evidence of attitudinal effects of such specialization.

Ecological Effects. Differential accentuation of initial major field differences over survey waves was observed for scores on the following press scales, where scales have been grouped according to the factors on which each had its highest loading:

Scientism Factor:	Scale 1 - Faculty Press for Science Scale 14 - Student Press for Science
Estheticism Factor:	Scale 4 - Faculty Press for Humanities Scale 7 - Student Press for Estheticism
Gregariousness Factor:	Scale 12 - Student Press for Vocationalism
Political Participation Factor:	Scale 11 - Student Press for Political Participation
Conventionalism Factor:	Scale 9 - Student Press for Playfulness

More specifically, the act of majoring in engineering or in the physical or biological sciences appeared to produce increases in press for science (Scales 1 and 14), while majoring in the fine arts or humanities tended to produce decreases in such press. Analogously, majoring in the fine arts or humanities tended to produce the largest increases in faculty press for humanities (Scale 4) while majoring in engineering or business tended to produce the largest decreases in such press. Of course the ecological effects on these scales were mainly the result of well known curricular differences; these scales (Scales 1 and 4) served mainly as marker variables which provided additional checks that the expected differential exposures of Panels A and B to major fields did indeed occur. Panel members in virtually every one of the nine major field groups exhibited increases in student press for estheticism over the survey years, though the increases for engineering majors

tended to be the smallest. The only other ecological effect appearing to hold over a two-year, as well as one-year, interval occurred on scale 12 (Student Press for Vocationalism): majoring in engineering, business, or in the physical sciences was accompanied by increases in such press; while majoring in the humanities, social sciences, or in psychology was associated with decreases in such press. In general, these results are highly consistent with a previous analysis of the ecological effects of entering major fields of study reported by Thistlethwaite (1969).

Attitudinal Effects. The main predictions concerning the effects of exposure to major fields of study upon the scientific, esthetic, and practical orientations of students were unconfirmed. On the contrary, both panels exhibited minimization (rather than accentuation) of initial major field differences in scientific orientations. With increasing exposure to college, panel members clearly become less (rather than more) polarized with respect to attitudes towards science. Similar, though less marked, minimization of differences in strength of practical and esthetic orientations was also observed. Contrary to the analyses of Snow (1959, 1963) and of Feldman and Newcomb (1969), exposures to major fields of study seemed to have no effects upon the scientific, esthetic, or practical orientations of students.

The only attitude scale, out of 16 incorporated in the survey questionnaires, to reveal clear evidence of differential accentuation of initial major field differences, was the Political Activity Index adapted from Woodward and Roper (1950). There was a tendency for majors in the social sciences, fine arts and humanities, and in psychology to exhibit the greatest increases in informal political activity, while majors in engineering and business exhibited the smallest increases. This effect appeared primarily during the interval between wave one and wave two, suggesting that major field teachers and peers may have had a role in mediating the impact of Cambodia and other college-wide influences.

The Impact of Cambodia and College-Wide Influences

Mailing of the questionnaires for the second survey wave of this study began only about two months after the President's announcement of the incursion into Cambodia. While about 98 percent of the panel members indicated, in response to this survey wave, that their campus had experienced one or more student protests or demonstrations, both panels reported a relatively moderate level of participation in these demonstrations. Three-fourths of Panel A and two-thirds of Panel B reported on wave two that they had participated in Moratorium activities or in student strikes, but more than half of these students indicated that their participation consisted in "attending a rally or seminar" or in "cutting one or more classes." Only about 12 percent of all panel members reported that they had "attended all of the scheduled activities," and only 9 percent said they had "helped to plan and organize the activities." In short, the occurrence of protests in response

to Cambodia (and perhaps in response also to the Kent State and Jackson State shootings) was a nearly universal phenomena on the campuses studied, but it is also clear that most panel members reported only a nominal degree of participation in these activities.

Episodic Trends. On each survey panel members were asked to characterize the main goals of the most memorable demonstration, if any, that had occurred on their campuses during the preceding year. A content analysis of responses indicated a very striking variation over survey waves in the frequency of mention of demonstrations related to the Vietnam war or to military activities. On waves one, two, and three, the percentages of Panel A members describing such demonstrations were 29.4, 78.3, and 31.1, respectively. Similarly, over the same survey waves the percentages of panel members reporting they had been active participants in a "campus group concerned with national or world issues (SDS, Vietnam committee, draft committee, etc.)" were 8.8, 24.2, and 8.8, respectively. This pattern of an inverted V trend with an elevated peaking on wave two followed by a reduced level on wave three was also observed on the following scales:

- | | |
|------------------|--|
| Press Scales: | Scale 10 - Student Press for Reflectiveness |
| | Scale 11 - Student Press for Political Participation |
| | Scale 15 - Student Press for Prosocial Concern |
| | Scale 17 - Student Press for Student Power |
| Attitude Scales: | Scale 18 - Prosocial Orientation |
| | Scale 26 - Anomia (alienation) |
| | Scale 28 - Civil Rights |
| | Scale 29 - Political Activity |

Among these trends the strongest, by far, were those occurring in scores on Scale 11 (Student Press for Political Participation) and on Scale 29 (Political Activity). On the latter scale, the individual items showing this trend most clearly indicated that the peak of political activity observed on wave two primarily reflected a rise in informal political activity: on this wave greater proportions of panel members reported they had frequently discussed political and social issues with friends, had written their Congressmen and Senators, and had attended meetings at which political speeches were made.

Perhaps the single attitude scale whose manifest content was most directly related to the type of campus demonstrations reported was the Pacifism scale. Yet the trend of scores on this scale was mainly linear, with a very strong rise in pacifism during the entire period of the study. While protest demonstrations may have triggered increased pacifism from wave one to wave two, presumably other bases were involved in the sustained elevations of pacifism among panel members on wave three. In general, the inverted V trends observed on these scales clearly indicated that the impact of Cambodia was temporary: correspondingly, the sharp drop in the frequency of occurrence of protests during the 1970-71 year indicated a period of relative quietude

on most campuses described by panel members.

A second non-linear trend observed in scores of panel members over survey waves took the form of a V trend with the most depressed level occurring on wave two. These trends can perhaps best be characterized as reflecting a reluctance to pursue "business-as-usual" during the outburst following the Cambodian incursion. This pattern was observed in scores on the following scales:

- | | |
|------------------|---|
| Press Scales: | Scale 8 - Student Press for Opposition to Faculty Influence |
| | Scale 12 - Student Press for Vocationalism |
| Attitude Scales: | Scale 18 - Practical Orientation |
| | Scale 19 - Science Orientation |
| | Scale 31 - Affluent Job Orientation |

The depression of scores on wave two for Scales 18 (Practical Orientation) and 19 (Science Orientation) suggests that the impact of external events may be related to the failure to confirm the predicted accentuation of initial major field differences in these orientations. However, the external events associated with Cambodia seemed to have a short-lived impact, and do not explain the failure to observe accentuation effects on wave three.

Linear Trends. Other college-wide influences appeared to be relatively continuous in the direction of their impact. Thus on two scales (Student Press for Affluence and Internationalism) the tendency was for average scores to decrease on later surveys, with the trend on the former scale being the more pronounced. Predominantly linear trends, but with a tendency for average scores to increase over survey waves, were found on the following six scales:

- | | |
|------------------|---|
| Press Scales: | Scale 2 - Faculty Press for Advanced Training |
| | Scale 6 - Faculty Press for Affiliation |
| | Scale 7 - Student Press for Estheticism |
| Attitude Scales: | Scale 20 - Free Speech |
| | Scale 21 - Esthetic Orientation |
| | Scale 22 - Domestic Social Welfare |

By far the most dramatic increases in scores over survey waves occurred on Scale 21 (Esthetic Orientation) and on Scale 7 (Student Press for Estheticism). Students in virtually every major field of study exhibited increases in average scores on these scales. Thus, the failure to observe accentuation of initial major field differences in esthetic orientation may be partly attributable to the pervasiveness of press for estheticism at the universities sampled.

Implications for Evaluating the Impacts of Major Fields of Study

The present study provided unequivocal evidence of some of the

ecological effects of varied exposures to major fields of study. The expected differential accentuation of initial major field differences in both faculty and student press were clearly confirmed. It may be concluded that the multiple time-series design was successful in detecting previously documented curricular differences in the modeled attitudes, values, and activities of teachers and student colleagues in the university. Yet, save for the differential accentuation of initial major field differences in informal political activity, there were virtually no attitudinal effects attributable to varied exposures to major fields of study.

It seems obvious that the unprecedented outburst on university campuses shortly before wave two made it more difficult to detect the impact of major fields of study. However, there are several observations which suggest that the negative results cannot be attributed entirely to these extraordinary external events. For example, the Political Activity Index appeared to be particularly sensitive to college-wide perturbations associated with the Cambodian episode, yet this scale also revealed evidence of differential accentuation of initial major field differences. Also the Cambodian episode had clearly subsided by wave three; these external events do not explain why major field groups in Panel A continued to exhibit minimization (rather than accentuation) of initial major field differences in both science and practical orientations over the two-year interval.

These results argue for a re-examination of the hypothesis that specialization in major fields of study produces polarization of attitudes and values. The current view attributes a charisma to the college or university teacher which may be largely illusory. Thus, the present results suggest that there are relatively few attitudinal effects associated with specialization in the major departments of the university. These negative results are actually quite consistent with previous research. Newcomb (1943), Freedman (1961), and Bereiter and Freedman (1962) have all found little effects from major fields of study. Similarly, in a cross-sectional study Lewis (1967) found no support for the hypothesis that specialization in a major field causes the type of polarization described by Snow. Virtually every one of the longitudinal studies cited by Feldman and Newcomb (1969, Vol. II, pp. 140-142) as illustrating accentuation of initial major field differences in attitudes and values suffers from the ambiguous procedure of simply grouping students according to major field of study at graduation. Moreover, several of the attitude measures used in this study were analogous to scales in the Allport-Vernon-Lindzey Study of Value used by Huntley (1965). Thus the discrepancy between these results and those reported by Feldman and Newcomb (1969) in their reanalysis of Huntley's data is particularly noteworthy. Our results suggest that the previously reported accentuation of initial major field differences in values may be artifacts arising from the failure of previous investigators to follow students who start and remain within the given curricula. In short, the present results could mean that the pursuit of major fields of study in higher education typically does not

entail the progressive differentiation between scientific and humanistic cultures which C. P. Snow envisaged.

While the impact of university teachers in changing attitudes seems to have been greatly exaggerated, the impact of secondary school teachers upon students has been largely ignored. It remains an open possibility that major field teachers have their primary impacts upon student attitudes at an earlier stage of school. The present study, for example, yielded evidence of extraordinarily large major field differences in science orientations on the initial survey wave. Moreover, there was consistent evidence of minimization of initial major field differences in such orientations. It appears that each panel was first identified at a stage of development in which major field differences were waning. The initial causes of these major field differences, as well as the developmental stages at which they first appear, remain obscure. It could be that major field teachers in secondary school are mainly responsible for the initial polarization in attitudes among students intending to major in different fields of study. Thus the absence of accentuation following exposures to varied intellectual disciplines may possibly be attributed to failure to study impacts at the time of initial exposure to these disciplines.

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APPENDIX A

Items Included in Each Press and Attitude Scale

Items are listed below according to scales. Scale numbers correspond to the three types of scales as follows: 1-6, faculty press scales; 7-17, student press scales; 18-33, attitude scales. For scales 1-26, the F or T in parentheses indicates whether a Disagree or Agree response, respectively, received greater numerical weight in the total scale score. For scales 27-29, the scoring weights assigned to each response category are shown in parentheses. Items are listed in order of the magnitude of the item vs. total scale score correlations shown in the right-hand column, and the first item for each scale may be considered the most representative item of each cluster. Item numbers indicate positions of items in the initial survey questionnaire.

I. Faculty Press Scales1. Science

- | | | |
|-----|--|-----|
| 36. | It was obvious that they believed the American college has over-emphasized education in the sciences. (F) | .63 |
| 30. | They encouraged student interest in understanding developments in modern science. (T) | .60 |
| 42. | They frequently encouraged students to take elective courses in sciences. (T) | .58 |
| 18. | They stressed the value of the objective methods of science in finding answers to empirical questions. (T) | .56 |
| 12. | They often stressed the limited usefulness of the concepts and methods of science. (F) | .50 |
| 24. | They sometimes criticized the trivial problems on which many scientists choose to work. (F) | .49 |

2. Advanced Training

- | | | |
|-----|---|-----|
| 31. | They tried to persuade qualified students to seek advanced training in their field of study. (T) | .69 |
| 19. | They spent little or no time counseling students about opportunities for graduate study in their field. (F) | .68 |
| 13. | They encouraged students to do graduate work. (T) | .65 |
| 25. | They showed little interest in recruiting students into their field of study. (F) | .62 |

43. They did not present much information about careers in their field of study. (F) .60
37. They taught their courses as if most of their students were going into graduate study. (T) .43
3. Vocationalism
26. Very few of their courses were aimed at preparing the student for his vocation. (F) .77
14. They offered many really practical courses designed to prepare the student for his occupation. (T) .75
20. They rarely tried to give the student the practical training he will need in his career field. (F) .70
44. Very few of their courses here will be useful to students who go into business or industry. (F) .62
38. Their courses tended to make students more practical and realistic. (T) .57
32. They frequently expressed the belief that the main purpose of college is to prepare the student for his vocation. (T) .52
4. Humanities
33. They tried to get students interested in the humanities. (T) .78
27. They seemed to have very little interest in drama or the arts. (F) .74
21. They frequently encouraged students to take courses in the humanities. (T) .72
39. Student interest in understanding and criticizing important works in art, music, and drama was encouraged by the faculty. (T) .72
45. They had little appreciation for scholarship in the humanities. (F) .72
15. They showed no interest in tracing the sources of their specialized field of study to philosophical or humanistic movements in the history of ideas. (F) .58
5. Supportiveness
34. Their counseling and guidance were really personal, patient, and extensive. (T) .75

46. They often discussed the students' goals with them and tried to help them discover their special talents. (T) .69
28. They expected the undergraduate to get by almost completely on his own resources. (F) .67
22. Students having difficulty with their courses could not expect to get special tutoring or counsel from them. (F) .64
16. They were sensitive to student complaints and grievances and frequently tried to remedy the situation. (T) .61
40. They tried to restrict appointments for planning study programs to one or two periods of the year. (F) .55
6. Affiliation
29. They took a personal interest in me and my work. (T) .79
41. They were typically warm and friendly in their relations with me. (T) .72
35. I never got to know any of them well enough to count them as good friends. (F) .71
23. They really talked with the students, not just at them. (T) .70
17. They were not unusually skillful in getting to know students as individuals. (F) .69
47. They seemed to feel that teachers should maintain a certain amount of "emotional distance" from students. (F) .63

II. Student Press Scales

7. Estheticism
104. They seemed to have little appreciation for the fine or applied arts. (F) .79
49. They had strong interest in poetry, music, painting, sculpture, architecture, etc. (T) .79
93. They often went to concerts and art exhibits when they were available. (T) .78
71. A lecture by an outstanding poet or dramatist would attract very few of them. (F) .77
82. When they got together they often talked about trends in art, music, or the theater. (T) .76

60. They would regard a student who insisted on analyzing and classifying art and music as a little odd. (F) .59
8. Opposition to Faculty Influence
50. Most of them felt their teachers had helped them to achieve greater direction, force, and clarity. (F) .71
61. They were generally dissatisfied and disappointed with their teachers. (T) .68
72. Most of my associates were grateful to the faculty for showing them a way of life worthy of imitation. (F) .65
83. They were often caught up in the contagious enthusiasms of their teachers. (F) .61
105. They sometimes ridiculed the faculty's mannerisms and ideas with wild caricatures. (T) .54
94. They had strategies for helping each other to meet the faculty's requirements with less work. (T) .53
9. Playfulness
62. Their parties were frequent and a lot of fun. (T) .69
84. There weren't many opportunities for us to get together in extra-curricular activities. (F) .65
51. We rarely had much time for play or recreation. (F) .65
106. Everyone of us had a lot of fun in college. (T) .64
95. We seldom went to movies, parties, etc., on the spur of the moment. (F) .62
73. Our gathering places were typically active and noisy. (T) .54
10. Reflectiveness
96. Long, serious philosophical discussions were common among them. (T) .81
107. They never talked very much about ethical perplexities. (T) .75
63. They had very little interest in the analysis of value systems, and the relativity of societies and ethics. (T) .74
85. They frequently debated social and political problems far into the night. (T) .72
52. Books dealing with psychological problems or personal values were widely read and discussed by them. (T) .72

74. They would have little interest in a lecture by a visiting philosopher or theologian. (F) .72

11. Political Participation

75. During the last year they took on a heavy load of active political work in support of their issues and candidates. (T) .72
97. They felt obliged to participate at every opportunity in the political process. (T) .72
86. Generally speaking, they had little or no interest in politics. (F) .67
108. They were inclined to believe that student political activity was a waste of time since it has little or no effect upon government. (F) .64
64. They felt that political activities by students had no place on a college campus. (F) .61
53. They were continually urging others to write their Congressman or Senator or other public officials to let them know what we wanted them to do on a public issue. (T) .56

12. Vocationalism

109. Most of them believed that the main goal of a college education is to prepare the student for his vocational career. (T) .68
87. They tended to look down on students who insisted on evaluating courses in terms of how well they prepared one for a job. (F) .64
76. They often talked about the jobs that will be available to them after graduation from college. (T) .62
98. They were more concerned about taking interesting courses than courses directly useful in their vocations. (F) .61
54. Few of them were eager to go out and start working in the practical world. (F) .59
65. They often complained that their college courses were not giving them the practical training they will need in their career field. (T) .34

13. Affluence

99. They were accustomed to having plenty of money. (T) .72
66. Most of them came from wealthy families. (T) .70

88.	Few of them ever expected to become wealthy. (F)	.63
55.	Many of them owned sports cars. (T)	.56
77.	Many of them had to work part-time to pay their college expenses. (F)	.52
110.	They tended to evaluate future jobs in terms of their intrinsic interest and had little concern about whether they offered one a chance to earn a great deal of money. (F)	.48
14.	<u>Science</u>	
111.	Most of them were planning careers in science. (T)	.80
89.	Most of my friends had strong interests in science and mathematics. (T)	.80
100.	Few, if any, of them would like to engage in scientific research. (F)	.78
78.	They rarely took any more science courses than were required. (F)	.76
67.	They would have very little interest in attending a lecture by a prominent scientist. (F)	.64
56.	They talked frequently about the philosophy and methods of science. (T)	.53
15.	<u>Prosocial Concern</u>	
57.	They felt that students should be actively engaged in solving social problems. (T)	.69
90.	They had little or no interest in working with volunteers on ameliorative community projects. (F)	.65
101.	Many of them felt that education would be improved if students were required to spend a year in community service at home or abroad. (T)	.63
68.	Mostly they felt it was not the university's role to solve all of society's problems. (F)	.60
112.	They would be suspicious of students who continually insisted that the university must become more responsive to public demands. (F)	.57
79.	They often complained that their course work was not relevant to contemporary life and problems. (T)	.44

16. Advanced Training

58. Most of my friends were planning to enter careers which required graduate or professional degrees. (T) .69
102. They had little interest in pursuing careers involving research or scholarship. (F) .69
80. None of them had much interest in doing research in their field of study. (F) .68
91. Many of them had a strong desire to contribute to their field of study. (T) .66
69. Few of them were seriously considering occupations which demand advanced graduate or professional training. (F) .65
113. I expect some of them to become eminent persons in their major fields of study. (T) .61

17. Student power

70. Mostly they felt that demonstrations to demand greater student power had no place on a college campus. (F) .77
92. They had little sympathy for student power advocates who disrupt the functioning of the university. (F) .74
81. Most of them believed that drastic changes are desirable in order to increase student participation in decision-making in the university. (T) .71
103. They often argued that students should have greater control of faculty appointments and promotions. (T) .71
114. They had little or no interest in having students participate in determining undergraduate admissions policies. (F) .66
59. They felt that students should be given greater responsibility for their own education and given greater freedom in designing their courses of study. (T) .63

III. Attitude Scales18. Practical Orientation

152. An essential function of education is to prepare students for practical achievement and financial reward. (T) .68
134. One of the best ways to improve colleges and universities is to increase the practical value of college courses. (T) .63

143. I would dislike managing a corporation or business enterprise. (F) .62
160. I am more interested in the critical analysis of principles and theories than in their practical applications. (F) .57
125. I enjoy participating in long, serious philosophical discussions. (F) .49
116. An important goal for me is being efficient and successful in practical affairs. (T) .26

19. Science Orientation

161. From the standpoint of a career field, I am more interested in the humanities than in the sciences. (F) .82
144. A career in scientific research does not appeal to me. (F) .80
126. Scientific or mathematical articles do not appeal to me. (F) .78
166. I would enjoy doing an experiment designed to test a scientific theory. (T) .78
117. If I were a university professor and had the necessary ability, I would prefer to teach science courses rather than poetry. (T) .77
169. In my opinion American colleges and universities place too much emphasis upon education in the sciences. (F) .63
135. In my opinion most criticisms of modern science are unwarranted and misdirected. (T) .49
153. I enjoy problems which require me to draw my own conclusions from some data or a body of facts. (T) .36

20. Free Speech

136. I believe in free speech for all no matter what their views might be. (T) .72
162. Unless there is freedom for many points of view to be presented, there is little chance that the truth can ever be known. (T) .60
118. People who hate our way of life should still have a chance to talk and be heard. (T) .62
167. I would not trust any person or group to decide what opinions can be freely expressed and what must be silenced. (T) .60

127. No matter what a person's political beliefs are, he is entitled to the same legal rights and protections as anyone else. (T) .59
154. You can't really be sure whether an opinion is true or not unless people are free to argue against it. (T) .57
145. Nobody has a right to tell another person what he should and should not read. (T) .55
170. Freedom of conscience should mean freedom to be an atheist as well as freedom to worship in the church of one's choice. (T) .55

21. Esthetic Orientation

168. I enjoy talking about music, theater, and other art forms with people who are interested in them. (T) .81
155. I am interested in the historical development of art, music, and drama. (T) .78
128. I don't care much for going to art galleries and looking at collections of sculpture and paintings. (F) .76
137. When I go to the theater I enjoy seeing the ballet or similar imaginative performances. (T) .75
146. I am bored by recordings of the works of composers such as Bach and Beethoven. (F) .63
171. I find it hard to get interested in most of the great books in the history of human thought. (F) .61
163. It puzzles me why some people will so avidly read and discuss Shakespeare's plays. (F) .57
119. I would enjoy being an actor on the stage. (T) .51

22. Domestic Social Welfare

138. The government in Washington ought to see to it that everybody who wants to work can find a job. (T) .70
129. If Negroes are not getting fair treatment in jobs and housing, the government in Washington should see to it that they do. (T) .67
147. The government ought to help people get doctors and hospital care at low cost. (T) .67
120. If cities and towns around the country need help to build more schools, the government in Washington ought to give them the money they need. (T) .66

156. The government should leave things like electric power and housing for private businessmen to handle. (T) .03

23. Pacifism

121. The U. S. must be willing to run any risk of war which may be necessary to prevent the spread of Communism. (F) .80
148. It is contrary to my moral principles to participate in war and the killing of other people. (T) .76
130. Pacifist demonstrations--picketing missile bases, peace walks, etc.--are harmful to the best interest of the American people. (F) .75
139. The U. S. has no moral right to carry its struggle against Communism to the point of risking the destruction of the human race. (T) .74
157. The real enemy today is no longer Communism but rather war itself. (T) .74
164. Pacifism is simply not a practical philosophy in the world today. (F) .66

24. Prosocial Orientation

140. I plan to be active in the cause of eliminating poverty and ghettos. (T) .74
158. I feel that I must be committed to helping other people, no matter what other goals I set for myself. (T) .73
122. One of the most important goals of higher education should be to prepare students to aid disadvantaged persons. (T) .64
165. I tend to be more realistic than idealistic, more occupied with knowing things as they are than with trying to change things. (F) .62
131. Generally, I prefer to work with things rather than people. (F) .55
149. I don't blame anyone for trying to remain free from commitments to others. (F) .39

25. Internationalism

123. This country would be better off if we just stayed home and did not concern ourselves with problems in other parts of the world. (F) .66
132. The United States should give economic help to the poorer countries of the world even if they can't pay for it. (T) .66

150. The United States should give help to foreign countries even if they are not as much against Communism as we are. (T) .64
141. The United States should keep soldiers overseas where they can help countries that are against Communism. (T) .49
26. Anomia
151. In spite of what some people say, the lot of the average man is getting worse, not better. (T) .65
159. It's hardly fair to bring a child into the world with the way things look for the future. (T) .63
133. These days a person doesn't really know whom he can count on. (T) .59
142. Nowadays, a person has to live pretty much for today and let tomorrow take care of itself. (T) .59
124. Most public officials are not really interested in the problems of the average man. (T) .58
27. Conservatism
175. How great a danger do you feel that American Communists are to this country at the present time--a very great danger, a great danger, some danger, hardly any danger, or no danger? .69
- A very great danger (6)
 A great danger (5)
 Some danger (4)
 Hardly any danger (2)
 No danger (1)
 Don't know (3)
172. Do you feel that the U. S. is losing power in the world or is it becoming more powerful? If LOSING POWER: How much does this disturb you--a great deal, somewhat, or very little? .67
- Losing power, and disturbed a great deal (6)
 Losing power and disturbed somewhat (5)
 Losing power and disturbed very little (3)
 Becoming more powerful (1)
 Staying the same (2)
 Don't know (4)
176. Do you agree or disagree with the statement, "In the past 25 years this country has moved dangerously close to Socialism." .57
- Disagree (1)
 Agree (3)
 Don't know (2)

173. Which of the statements below comes closest to expressing how you feel about the state of morals in this country at the present time? .39

They are pretty good and getting better	(1)
They are pretty good, but getting worse	(2)
They are pretty bad, but getting better	(2)
They are pretty bad, and getting worse	(3)
Don't know, or the same as ever	(2)

174. How do you feel about the following statement: "The Federal government is gradually taking away our basic freedoms." .31

Agree	(2)
Disagree	(1)
Don't know	(1)

28. Civil Rights

182. Congress passed a bill that says Negroes should have the right to go to any hotel or restaurant they can afford, just like white people. Some people feel that this is something the government in Washington should support. Others feel that the government should stay out of this matter. Have you been interested enough in this to favor one side over another? .79

*Yes	(-)
No	(3)

*If YES, which of the following best expresses your position?

Favor federal intervention to secure integrated public accommodations, and mind made up	(5)
---	-----

With some reservations, favor federal intervention to secure integrated public accommodations	(4)
---	-----

With some reservations, oppose federal intervention to secure integrated public accommodations	(2)
--	-----

Oppose federal intervention to secure integrated public accommodations	(1)
--	-----

178. Some people say that the government in Washington should see to it that white and colored children are allowed to go to the same schools. Others claim that this is not the government's business. Have you been concerned enough about this question to favor one side over the other? .78

*Yes	(-)
No	(3)

*If YES, which of the following best expresses your position?

- Favor school integration and mind made up (5)
- Favor school integration but have some reservations (4)
- Against school integration but have some reservations (2)
- Against school integration and mind made up (1)

181. Some people feel that if colored people are not getting fair treatment in jobs the government in Washington ought to see that they do. Others feel that this is not the federal government's business. Have you had enough interest in this question to favor one side over the other? .77

- *Yes (-)
- No (3)

*If YES, which of the following best expresses your position?

- Favor federal intervention to secure fair job treatment (5)
- With some reservations, favor federal intervention to secure fair job treatment (4)
- With some reservations, oppose federal intervention to secure fair job treatment (2)
- Oppose federal intervention to secure fair job treatment (1)

180. Which of these statements would you agree with? .68

- White people have a right to keep colored people out of their neighborhoods. Feel strongly (1)
- White people have a right to keep colored people out of their neighborhoods. Feel not too strongly (2)
- Colored people have a right to live wherever they can afford to. Feel not too strongly (4)
- Colored people have a right to live wherever they can afford to. Feel strongly (5)
- Don't know; haven't made up mind about residential integration (3)

179. What if you had children the school board said must be taken a little farther from home by bus in order to achieve school integration. Do you feel you should go along with the decision, try to have it changed, or what? .64

- Go along with decision (3)
- Not sure; it depends (2)
- Try to change decision (1)

29. Political Activity Index

186. In the last four years have you worked for the election of any political candidates by doing things like distributing circulars or leaflets, making speeches, or calling on voters? .69

Yes, I worked intensively on occasion (3)
 Yes, but only nominally (2)
 No (1)

187. Have you attended any meetings in the last four years at which political speeches were made? .66

Yes, frequently (3)
 Yes, occasionally (2)
 No (1)

185. Have you ever written or talked to your Congressman or Senator or other public officials to let them know what you would like them to do on a public issue you were interested in? .58

Yes, frequently (3)
 Yes, occasionally (2)
 No (1)

184. When you get together with your friends would you say that you discuss political and social issues frequently, occasionally, or never? .49

*Frequently (3)
 *Occasionally (2)
 Never (1)

*If FREQUENTLY OR OCCASIONALLY, which of the statements below best describes the part you yourself take in these discussions with your friends?

Even though I have my own opinions, I usually just listen (1)

Mostly I listen, but once in a while I express my opinion (2)

I take an equal share in the conversation (3)

I do more than just hold up my end in the conversation; I usually try to convince others that I am right (4)

188. In the last four years have you contributed money to a political party or to a candidate for a political office? .48

Yes (2)
 No (1)

183. Do you happen to belong to any organizations that sometimes take a stand on housing, better government, school problems, or other public issues? .42
- No (1)
Yes (2)
- 30-33. Note: These scales were derived from responses to question 189: "Which of the following do you consider important requirements for a satisfying job or career?" Requirements relevant to each scale are listed below. Responses indicating the relative importance of the given requirement were scored as follows:
- Highly important (4)
Moderately important (3)
Slightly important (2)
Unimportant (1)
30. Prosocial Job Orientation
- m. Give me an opportunity to be helpful to others. .78
- h. Give me opportunities to work with people rather than things. .78
- d. Provide me an opportunity to work on the application of knowledge to practical affairs. .63
31. Affluent Job Orientation
- b. Provide me with a chance to earn a good deal of money. .82
- g. Give me social status and prestige. .82
- i. Enable me to look forward to a stable, secure future. .79
32. Intellectual Job Orientation
- c. Give me an opportunity to live and work in the world of ideas. .78
- e. Provide me an opportunity to work on theoretical problems regardless of practical value. .76
- f. Permit me to be creative and original. .71
33. Individualistic Job Orientation
- l. Provide me with adventure. .76
- k. Give me a chance to exercise leadership .72
- j. Leave me relatively free of supervision by others. .66

APPENDIX B

TABLE B-1

Percentages of Variance in Press and Attitude Scale Scores Associated
with Major Field Classifications in Each Panel on Each Wave^a

Scale	Omega-squared estimate ($100 \times \omega^2$)					
	Panel A			Panel B		
	(N = 1,036)			(N = 822)		
	1969	1970	1971	1969	1970	1971
19 Science Orientation	37.1	34.3	29.6	42.2	38.5	33.1
4 Humanities (IP)	12.5	23.2	28.0	30.6	28.9	
1 Science (FP)	15.6	23.3	25.6	25.3	27.5	
14 Science (SP)	15.2	20.0	19.2	21.9	21.6	
18 Practical Orientation	15.5	12.5	10.4	16.0	18.6	12.5
3 Vocationalism (IP)	8.1	9.8	13.3	13.2	17.8	
21 Esthetic Orientation	11.9	11.0	11.3	13.9	11.7	12.8
12 Vocationalism (SP)	7.1	8.9	9.8	11.9	12.5	
7 Estheticism (SP)	5.6	8.1	9.0	12.5	12.1	
29 Political Activity	7.2	9.0	8.0	7.6	7.7	7.8
24 Prosocial Orientation	8.3	8.4	5.7	6.1	7.7	5.8
10 Reflectiveness (SP)	4.7	5.7	6.8	7.7	6.7	
23 Pacifism	7.3	4.2	5.5	6.8	6.5	3.6
31 Affluent Job Orientation	5.6	4.9	4.5	6.5	7.1	4.3
15 Prosocial Concern (SP)	6.0	6.2	4.0	6.1	4.0	
30 Prosocial Job Orientation	4.9	5.3	4.7	4.9	5.0	5.1
17 Student Power (SP)	3.4	4.3	3.9	5.8	3.6	
28 Civil Rights	3.8	3.8	5.2	3.0	5.0	3.4
11 Political Participation (SP)	3.2	4.6	1.6	2.3	2.4	
32 Intellectual Job Orientation	2.2	.6	1.0	2.6	4.1	2.8
22 Domestic Social Welfare	2.3	1.2	2.2	3.4	3.0	2.3
27 Conservatism	1.8	1.7	2.8	1.9	3.6	2.9
20 Free Speech	1.7	1.3	2.2	3.2	2.4	1.6
33 Individualistic Job Orientation	1.1	1.5	1.6	1.7	2.4	2.2
13 Affluence (SP)	.3	.9	1.8	2.2	3.1	
16 Advanced Training (SP)	1.2	.7	.8	3.9	2.0	
9 Playfulness (SP)	1.2	3.8	1.6	1.4	.1	
26 Anomia	.2	.9	2.4	.6	2.3	2.5
8 Opposition to Fac. Influence (SP)	1.3	.8	.8	1.4	2.0	
2 Advanced Training (IP)	.6	0.0	.7	1.3	1.6	
6 Affiliation (IP)	.3	.6	.1	1.4	.6	
5 Supportiveness (IP)	.6	.1	.6	.4	1.0	
25 Internationalism	.4	0.0	.2	.8	.8	.6

^a The major field classification and the numbers of Panel A and Panel B members in each broad major field are shown in Table B-2.

TABLE B-2
 Classification of Panel A and B Members by
 Broad Major Field of Study

Broad Major Field of Study ^a	Number of students		Percentages	
	Panel A	Panel B	Panel A	Panel B
Biological Sciences (03, 04, 05, 06, 07, 08)	58	60	5.6	7.3
Business (09)	80	104	7.7	12.7
Engineering (16, 17, 18, 19, 20, 21)	168	144	16.2	17.5
Fine Arts or Humanities (22, 23, 24, 25, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43)	117	124	11.3	15.1
Mathematics or Statistics (46)	28.	38	2.7	4.6
Physical Sciences (48, 49, 50, 51)	45	38	4.3	4.6
Psychology (53)	42	41	4.1	5.0
Social Sciences (54, 55, 56, 57, 58, 59)	93	103	9.0	12.5
Miscellaneous fields	405	170	39.1	20.7
Totals	<u>1,036</u>	<u>822</u>	<u>100.0</u>	<u>100.0</u>

^a Codes in parentheses correspond to major field codes appearing on the survey questionnaires (Appendix C). In each panel students were assigned to a major field group on the basis of stable broad major field affiliations over waves one and two; students not exhibiting such stability were assigned to the miscellaneous group.

APPENDIX C

Survey Questionnaires

The mail questionnaires used in the three survey waves during the summers of 1969, 1970, and 1971 follow immediately. The initial questionnaire was simply entitled, "Survey of College Students", while the questionnaires on waves two and three included the subtitles, "Survey No. 2" and "Survey No. 3", respectively.

SURVEY OF COLLEGE STUDENTS

Conducted under a Research Grant made to Vanderbilt University

Please check the name and address on the label attached to the envelope in which you received this questionnaire. PLEASE MAKE SURE THE ADDRESS LISTED IS ONE AT WHICH YOU CAN RECEIVE MAIL ONE YEAR FROM NOW (SUMMER, 1970). If both are correct, skip to the marking instructions. If either should be corrected, please enter below the corrections to be made:

NAME _____
(Last Name) (First Name) (Middle Initial)

HOME ADDRESS _____
(Street Address) (City) (State) (Zip Code)

MARKING INSTRUCTIONS: This questionnaire will be key-punched; the numbers in parentheses on the right margin of each page are for the key-puncher and you should ignore them.

For most items, you should make your response by circling the number corresponding to the appropriate alternative. These numbers appear immediately after the rows of dots. Special instructions (required for particular questions) will be introduced as they are needed.

1. Sex. (Circle the number which corresponds to your sex.)

Male.....1 (7)
Female.....2

2. Do you plan to be enrolled in college this Fall? (Circle one.)

*Yes, I am continuing as a full-time student this Fall.....1 (8)
*Yes, I am continuing, but as a part-time student this Fall.....2
No, I have withdrawn but plan to return later.....3
No, I have withdrawn and do not expect to return.....4

*If "YES": PLEASE ANSWER a and b:

a. What class standing will you have this Fall? (Circle one.)

Sophomore.....1 (9)
Junior.....2
Senior.....3

b. Will you be enrolled in the same college you attended in Fall, 1968?
(Circle one.)

Yes.....1 (10)
*No.....2

*If "NO": What college or university will you be attending?

(Name) (City) (State)

3. In your opinion, do you have the ability to successfully pursue a graduate or professional degree? (Circle one.)

No.....1 (11)
Probably no.....2
Probably yes.....3

4. During the past academic year (including any summer sessions you attended this year) how many hours of credit did you earn? (Write the number in the space provided.)

_____ hours (12-13)

5. What are your educational plans for the future?

Circle the number corresponding to the highest level of education you expect to complete. If you do not plan to seek any more higher education, circle the number of the alternative most closely corresponding to the highest level of education you have already completed.

- I expect to complete three years of college.....1 (14)
- I expect to get a bachelor's degree.....2
- I expect to do some graduate study but not enough for an advanced degree.....3
- I expect to get a Master's degree.....4
- I expect to obtain a first-professional degree (M.D., D.D.S, L.L.B., or B.D.).....5
- I expect to obtain a Ph.D. or other equivalent academic doctorate degree.....6

6. From the following list, circle the two-digit number corresponding to your undergraduate major field of study during the last year. If you have not yet had to declare a major, circle the number of the field which you intended during the past year to declare as your undergraduate major field of study. If you had a joint major field of study, circle the numbers of each department involved, but place an asterisk (*) beside the number of the main department.

- | | |
|--|--|
| <u>Agriculture and/or Forestry</u> 01 | <u>Home Economics</u> 31 (15-16) |
| <u>Architecture and/or Design</u> 02 | <u>Humanities</u> 32 |
| <u>Biological Sciences (General Biology)</u> .03 | English language & literature....33 |
| Bacteriology, Molecular Biology, Microbiology.....04 | Foreign languages & literature....34 |
| Biochemistry.....05 | Classical languages.....35 |
| General Botany.....06 | French.....36 |
| General Zoology.....07 | German.....37 |
| Other Biological sciences.....08 | Spanish.....38 |
| <u>Business, Commerce and Management</u> ...09 | Other foreign languages (including linguistics).....39 |
| <u>Education</u> 10 | History.....40 |
| Elementary and/or secondary.....11 | Philosophy.....41 |
| Foundations.....12 | Religion & Theology.....42 |
| Educational Psychology and counseling.....13 | Other Humanities fields.....43 |
| Educational Administration.....14 | <u>Journalism</u> 44 |
| Other Education fields.....15 | <u>Library Science</u> 45 |
| <u>Engineering</u> 16 | <u>Mathematics and Statistics</u> 46 |
| Chemical.....17 | <u>Physical & Health Education</u> 47 |
| Civil.....18 | <u>Physical Sciences</u> 48 |
| Electrical.....19 | Chemistry.....49 |
| Mechanical.....20 | Physics.....50 |
| Other Engineering fields.....21 | Other physical sciences.....51 |
| <u>Fine Arts</u> 22 | <u>Pre-law</u> (use this code only if this is a recognized major field of study at your school).....52 |
| Art.....23 | <u>Psychology</u> 53 |
| Dramatics and Speech.....24 | <u>Social Sciences</u> 54 |
| Other Fine Arts.....25 | Anthropology & Archaeology.....55 |
| <u>Geography</u> 26 | Economics.....56 |
| <u>Health Fields</u> 27 | Political Science, Government....57 |
| Nursing.....28 | Sociology.....58 |
| Pre-medicine (use this code only if this is a recognized major field of study at your school).....29 | Other social sciences.....59 |
| Other health fields.....30 | <u>All other fields</u> 60 |

7. Of the total number of credit-hours you have described in Item 4, how many of them were earned in the same broad field of study which includes your major field during the past year? (Broad fields of study are underlined in Item 6.) For example, if your specific major was Chemical Engineering, you should indicate below the total number of credit-hours you earned in all engineering courses last year.)

8. In which of the following extracurricular groups have you been an active participant during the past academic year? (Circle as many as apply.)

- | | |
|--|------|
| Afro-American studies group (or related concerns).....1 | (19) |
| Campus group concerned with supporting an organized political party or a political candidate.....2 | (20) |
| Campus group concerned with local issues (parietal hours, women's curfew hours, etc.).....3 | (21) |
| Campus group concerned with national or world issues (SDS, Vietnam committee, draft committee, etc.).....4 | (22) |
| Editorial staff or campus publications.....5 | (23) |
| Fraternity (inter-fraternity council, etc.).....6 | (24) |
| Pre-professional student association (Engineering Assn., Pre-med. club, etc.).....7 | (25) |
| Student government organization.....8 | (26) |
| Other (Circle and specify: _____).....9 | (27) |

9. Has your campus experienced any student protests or demonstrations during the past academic year?

- | | |
|------------|------|
| *Yes.....1 | (28) |
| No.....2 | |

*If YES: PLEASE ANSWER a and b BELOW:

- a. Briefly describe the main goals of the most memorable demonstration on your campus during the past year: _____ (29)

b. How would you characterize your attitude toward this demonstration on your campus?

- | | |
|--|------|
| Strongly approved.....1 | (30) |
| Approved but with reservations.....2 | |
| Can't decide; haven't made up mind.....3 | |
| Disapprove but with reservations.....4 | |
| Strongly disapprove.....5 | |

10. During the past year have you been active in civil rights, political and social action, or other demonstrations?

- | | |
|--|------|
| *Yes, very active.....1 | (31) |
| *Yes, moderately active.....2 | |
| No, only nominally.....3 | |
| No, I haven't been involved at all.....4 | |

*If YES: Briefly describe the main goals of the demonstrations in which you have been active:

- _____ (32)
- _____
- _____

11. Listed below are a number of awards and honors. Which of these have you received during the past year? (Circle as many as apply.)

Named on Dean's list.....1	(33)
Elected to Phi Beta Kappa or other honor society based on academic achievement.....2	(34)
Won scholarship based on academic record.....3	(35)
Won prize or award for literary, musical, or artistic work.....4	(36)
Won prize or award for scholarship or research work (e.g., "Smith prize for best biology experiment")....5	(37)
Other award or honor (Circle and specify: _____).....6	(38)
No special honors.....7	(39)

Descriptions of Your Undergraduate Environment

NOTE: The purpose of this section is to obtain information about your undergraduate environment during the past school year.

We want to study permanence and change in college environments and to relate such changes to the development of student attitudes and career plans.

You are asked to be a reporter about those parts of your college you have known best. You have lived in a particular college environment, participated in its activities, seen its features, and sensed its expectations and demands. What kind of place was it?

Remember, your responses will be kept confidential; no person, except those working on this research project, will ever see your responses. Your responses will not be used to evaluate your teachers, your fellow students, or your college. They will be used only to study the effects of different environments upon career plans. There are no "right" or "wrong" answers; so please answer the questions honestly and try to estimate the degree to which the statements below characterized your college environment last year.

INSTRUCTIONS FOR PART A: Statements in PART A are about faculty members with whom you have had most of your courses or have known best during the past year--their courses and teaching methods, their values and emphases, and their formal and informal interactions with you. The ratings you make here may or may not correspond to the ratings you would make of faculty members in other parts of the college or university. We do not want you to describe all faculty members in your school. Think only of the teachers with whom you have had most of your courses or known best during the past year. We want you to describe their behavior and the effects of their behavior upon you.

DIRECTIONS: Please rate your teachers according to the degree to which each of the following statements describes their behavior, or the effects of their behavior upon you. The numbers in the rating scale should be interpreted as follows:

- 1 -- Strongly disagree; highly uncharacteristic and almost always false as a description of them.
- 2 -- Mostly disagree; mostly false as a description of them.
- 3 -- Neither agree nor disagree; true about as often as it was false as a description of them.
- 4 -- Mostly agree; mostly true as a description of them.
- 5 -- Strongly agree; highly characteristic and almost always true as a description of them.

CIRCLE THE NUMBER WHICH CORRESPONDS TO YOUR RATING FOR EACH DESCRIPTION

How the rating scale is to be used can be illustrated with the following statement:

"The faculty participated with students in many out-of-class activities."

If you should "mostly agree" that this statement characterized your teachers last year, you would mark as follows:

The faculty participated with students in many out-of-class activities.

Disagree	Agree
1 2 3	④ 5

PLEASE ANSWER EVERY ITEM IN PART A

PART A -- DESCRIPTIONS OF FACULTY MEMBERS

	<u>Disagree</u>					<u>Agree</u>
12. They often stressed the limited usefulness of the concepts and methods of science.	1	2	3	4	5	(40)
13. They encouraged students to do graduate work.	1	2	3	4	5	(41)
14. They offered many really practical courses designed to prepare the student for his occupation.	1	2	3	4	5	(42)
15. They showed no interest in tracing the sources of their specialized field of study to philosophical or humanistic movements in the history of ideas.	1	2	3	4	5	(43)
16. They were sensitive to student complaints and grievances and frequently tried to remedy the situation.	1	2	3	4	5	(44)
17. They were not unusually skillful in getting to know students as individuals.	1	2	3	4	5	(45)
18. They stressed the value of the objective methods of science in finding answers to empirical questions.	1	2	3	4	5	(46)
19. They spent little or no time counseling students about opportunities for graduate study in their field.	1	2	3	4	5	(47)
20. They rarely tried to give the student the practical training he will need in his career field.	1	2	3	4	5	(48)
21. They frequently encouraged students to take courses in the humanities.	1	2	3	4	5	(49)
22. Students having difficulty with their courses could not expect to get special tutoring or counsel from them.	1	2	3	4	5	(50)
23. They really talked <u>with</u> the students, not just at them.	1	2	3	4	5	(51)
24. They sometimes criticized the trivial problems on which many scientists choose to work.	1	2	3	4	5	(52)
25. They showed little interest in recruiting students into their field of study.	1	2	3	4	5	(53)
26. Very few of their courses were aimed at preparing the student for his vocation.	1	2	3	4	5	(54)
27. They seemed to have very little interest in drama or the arts.	1	2	3	4	5	(55)
28. They expected the undergraduate to get by almost completely on his own resources.	1	2	3	4	5	(56)
29. They took a personal interest in me and my work.	1	2	3	4	5	(57)
30. They encouraged student interest in understanding developments in modern science.	1	2	3	4	5	(58)
31. They tried to persuade qualified students to seek advanced training in their field of study.	1	2	3	4	5	(59)
32. They frequently expressed the belief that the main purpose of college is to prepare the student for his vocation.	1	2	3	4	5	(60)
33. They tried to get students interested in the humanities.	1	2	3	4	5	(61)
34. Their counseling and guidance were really personal, patient, and extensive.	1	2	3	4	5	(62)
35. I never got to know any of them well enough to count them as good friends.	1	2	3	4	5	(63)
36. It was obvious that they believed the American college has over-emphasized education in the sciences.	1	2	3	4	5	(64)

PART A-- DESCRIPTIONS OF FACULTY MEMBERS

	<u>Disagree</u>					<u>Agree</u>
37. They taught their courses as if most of their students were going into graduate study.	1	2	3	4	5	(65)
38. Their courses tended to make students more practical and realistic.	1	2	3	4	5	(66)
39. Student interest in understanding and criticizing important works in art, music, and drama was encouraged by the faculty.	1	2	3	4	5	(67)
40. They tried to restrict appointments for planning study programs to one or two periods of the year.	1	2	3	4	5	(68)
41. They were typically warm and friendly in their relations with me.	1	2	3	4	5	(69)
42. They frequently encouraged students to take elective courses in the sciences.	1	2	3	4	5	(70)
43. They did not present much information about careers in their field of study.	1	2	3	4	5	(71)
44. Very few of their courses here will be useful to students who go into business or industry.	1	2	3	4	5	(72)
45. They had little appreciation for scholarship in the humanities.	1	2	3	4	5	(73)
46. They often discussed the students' goals with them and tried to help them discover their special talents.	1	2	3	4	5	(74)
47. They seemed to feel that teachers should maintain a certain amount of "emotional distance" from students.	1	2	3	4	5	(75)
48. Are most of the faculty members you have just described in your major field of study as described in Item 6?						
	Yes.....1					(76)
	No.....2					

PART B -- DESCRIPTIONS OF STUDENT ASSOCIATES

INSTRUCTIONS FOR PART B: Statements in PART B are about the undergraduate colleagues you knew best during the past year. Your answers to this part should tell us what was generally characteristic of the undergraduate students you knew best, identified with, or associated with most commonly during the past year. The ratings you make for your personal associates in your undergraduate school may or may not correspond to the way you would rate undergraduate students in general or other groups of students at your college.

Describe only those students you knew best and associated with most commonly during the past year. They may be students in your major field, living quarters, or other campus groups.

DIRECTIONS: Follow the same rating directions shown for Part A.

PLEASE ANSWER EVERY ITEM IN PART B

	<u>Disagree</u>					<u>Agree</u>
49. They had strong interest in poetry, music, painting, sculpture, architecture, etc.	1	2	3	4	5	(7)
50. Most of them felt their teachers had helped them to achieve greater direction, force, and clarity.	1	2	3	4	5	(8)
51. We rarely had much time for play or recreation.	1	2	3	4	5	(9)
52. Books dealing with psychological problems or personal values were widely read and discussed by them.	1	2	3	4	5	(10)
53. They were continually urging others to write their Congressman or Senator or other public officials to let them know what we wanted them to do on a public issue.	1	2	3	4	5	(11)
54. Few of them were eager to go out and start working in the practical world.	1	2	3	4	5	(12)
55. Many of them owned sports cars.	1	2	3	4	5	(13)

PART B -- DESCRIPTIONS OF STUDENT ASSOCIATES

	Disagree					Agree	
56. They talked frequently about the philosophy and methods of science.	1	2	3	4	5	(14)	
57. They felt that students should be actively engaged in solving social problems.	1	2	3	4	5	(15)	
58. Most of my friends were planning to enter careers which required graduate or professional degrees.	1	2	3	4	5	(16)	
59. They felt that students should be given greater responsibility for their own education and given greater freedom in designing their courses of study.	1	2	3	4	5	(17)	
60. They would regard a student who insisted on analyzing and classifying art and music as a little odd.	1	2	3	4	5	(18)	
61. They were generally dissatisfied and disappointed with their teachers.	1	2	3	4	5	(19)	
62. Their parties were frequent and a lot of fun.	1	2	3	4	5	(20)	
63. They had very little interest in the analysis of value systems, and the relativity of societies and ethics.	1	2	3	4	5	(21)	
64. They felt that political activities by students had no place on a college campus.	1	2	3	4	5	(22)	
65. They often complained that their college courses were not giving them the practical training they will need in their career fields.	1	2	3	4	5	(23)	
66. Most of them came from wealthy families.	1	2	3	4	5	(24)	
67. They would have very little interest in attending a lecture by a prominent scientist.	1	2	3	4	5	(25)	
68. Mostly they felt it was not the university's role to solve all of society's problems.	1	2	3	4	5	(26)	
69. Few of them were seriously considering occupations which demand advanced graduate or professional training.	1	2	3	4	5	(27)	
70. Mostly they felt that demonstrations to demand greater student power had no place on a college campus.	1	2	3	4	5	(28)	
71. A lecture by an outstanding poet or dramatist would attract very few of them.	1	2	3	4	5	(29)	
72. Most of my associates were grateful to the faculty for showing them a way of life worthy of imitation.	1	2	3	4	5	(30)	
73. Our gathering places were typically active and noisy.	1	2	3	4	5	(31)	
74. They would have little interest in a lecture by a visiting philosopher or theologian.	1	2	3	4	5	(32)	
75. During the last year they took on a heavy load of active political work in support of their issues and candidates.	1	2	3	4	5	(33)	
76. They often talked about the jobs that will be available to them after graduation from college.	1	2	3	4	5	(34)	
77. Many of them had to work part-time to pay their college expenses.	1	2	3	4	5	(35)	
78. They rarely took any more science courses than were required.	1	2	3	4	5	(36)	
79. They often complained that their course work was not relevant to contemporary life and problems.	1	2	3	4	5	(37)	
80. None of them had much interest in doing research in their field of study.	1	2	3	4	5	(38)	

PART B -- DESCRIPTIONS OF STUDENT ASSOCIATES

	Disagree					Agree	
81. Most of them believed that drastic changes are desirable in order to increase student participation in decision-making in the university.	1	2	3	4	5	(39)	
82. When they got together they often talked about trends in art, music, or the theater.	1	2	3	4	5	(40)	
83. They were often caught up in the contagious enthusiasms of their teachers.	1	2	3	4	5	(41)	
84. There weren't many opportunities for us to get together in extra-curricular activities.	1	2	3	4	5	(42)	
85. They frequently debated social and political problems far into the night.	1	2	3	4	5	(43)	
86. Generally speaking, they had little or no interest in politics.	1	2	3	4	5	(44)	
87. They tended to look down on students who insisted on evaluating courses in terms of how well they prepared one for a job.	1	2	3	4	5	(45)	
88. Few of them ever expected to become wealthy.	1	2	3	4	5	(46)	
89. Most of my friends had strong interests in science and mathematics.	1	2	3	4	5	(47)	
90. They had little or no interest in working with volunteers on ameliorative community projects.	1	2	3	4	5	(48)	
91. Many of them had a strong desire to contribute to their field of study.	1	2	3	4	5	(49)	
92. They had little sympathy for student power advocates who disrupt the functioning of the university.	1	2	3	4	5	(50)	
93. They often went to concerts and art exhibits when they were available.	1	2	3	4	5	(51)	
94. They had strategies for helping each other to meet the faculty's requirements with less work.	1	2	3	4	5	(52)	
95. We seldom went to movies, parties, etc., on the spur of the moment.	1	2	3	4	5	(53)	
96. Long, serious philosophical discussions were common among them.	1	2	3	4	5	(54)	
97. They felt obliged to participate at every opportunity in the political process.	1	2	3	4	5	(55)	
98. They were more concerned about taking interesting courses than courses directly useful in their vocations.	1	2	3	4	5	(56)	
99. They were accustomed to having plenty of money.	1	2	3	4	5	(57)	
100. Few, if any, of them would like to engage in scientific research.	1	2	3	4	5	(58)	
101. Many of them felt that education would be improved if students were required to spend a year in community service at home or abroad.	1	2	3	4	5	(59)	
102. They had little interest in pursuing careers involving research or scholarship.	1	2	3	4	5	(60)	
103. They often argued that students should have greater control of faculty appointments and promotions.	1	2	3	4	5	(61)	
104. They seemed to have little appreciation for the fine or applied arts.	1	2	3	4	5	(62)	
105. They sometimes ridiculed the faculty's mannerisms and ideas with wild caricatures.	1	2	3	4	5	(63)	

PART B -- DESCRIPTIONS OF STUDENT ASSOCIATES

	<u>Disagree</u>			<u>Agree</u>			
106. Everyone of us had a lot of fun in college.	1	2	3	4	5	(64)	
107. They never talked very much about ethical perplexities.	1	2	3	4	5	(65)	
108. They were inclined to believe that student political activity was a waste of time since it has little or no effect upon government.	1	2	3	4	5	(66)	
109. Most of them believed that the main goal of a college education is to prepare the student for his vocational career.	1	2	3	4	5	(67)	
110. They tended to evaluate future jobs in terms of their intrinsic interest and had little concern about whether they offered one a chance to earn a great deal of money.	1	2	3	4	5	(68)	
111. Most of them were planning careers in science.	1	2	3	4	5	(69)	
112. They would be suspicious of students who continually insisted that the university must become more responsive to public demands.	1	2	3	4	5	(70)	
113. I expect some of them to become eminent persons in their major fields of study.	1	2	3	4	5	(71)	
114. They had little or no interest in having students participate in determining undergraduate admissions policies.	1	2	3	4	5	(72)	
115. Which group of undergraduate colleagues have you been mostly describing? (Circle as many as apply.)							
Students in my major field of study.....						1	(73)
Campus group concerned with political or social issues.....						2	(74)
Fraternity friends.....						3	(75)
Dormitory or living quarters group.....						4	(76)
Other (Circle and specify: _____)....						5	(77)

Personal Orientations

INSTRUCTIONS: In the following items you are asked to report your own attitudes, opinions, and feelings regarding a variety of subjects. We are interested in how you feel about these subjects at the present time. Remember your answers will be held in the strictest confidence. We are interested only in statistical relationships and will under no circumstances report responses on an individual or university basis.

Please indicate your agreement or disagreement with each of the following statements. Circle the number corresponding to your degree of agreement with each statement; numbers on the rating scale should be interpreted as follows:

- 1 -- Strongly disagree
- 2 -- Disagree with reservations
- 3 -- Can't decide; agree as much as disagree
- 4 -- Agree with reservations
- 5 -- Strongly agree

PLEASE ANSWER EVERY ITEM IN THIS SECTION

	<u>Disagree</u>			<u>Agree</u>			
116. An important goal for me is being efficient and successful in practical affairs.	1	2	3	4	5	(7)	
117. If I were a university professor and had the necessary ability, I would prefer to teach science courses rather than poetry.	1	2	3	4	5	(8)	

Personal Orientations

	<u>Disagree</u>					<u>Agree</u>
118. People who hate our way of life should still have a chance to talk be heard.	1	2	3	4	5	(9)
119. I would enjoy being an actor on the stage.	1	2	3	4	5	(10)
120. If cities and towns around the country need help to build more schools, the government in Washington ought to give them the money they need.	1	2	3	4	5	(11)
121. The U.S. must be willing to run any risk of war which may be necessary to prevent the spread of Communism.	1	2	3	4*	5	(12)
122. One of the most important goals of higher education should be to prepare students to aid disadvantaged persons.	1	2	3	4	5	(13)
123. This country would be better off if we just stayed home and did not concern ourself with problems in other parts of the world.	1	2	3	4	5	(14)
124. Most public officials are not really interested in the problems of the average man.	1	2	3	4	5	(15)
125. I enjoy participating in long, serious philosophical discussions.	1	2	3	4	5	(16)
126. Scientific or mathematical articles do not appeal to me.	1	2	3	4	5	(17)
127. No matter what a person's political beliefs are, he is entitled to the same legal rights and protections as anyone else.	1	2	3	4	5	(18)
128. I don't care much for going to art galleries and looking at collections of sculpture and paintings.	1	2	3	4	5	(19)
129. If Negroes are not getting fair treatment in jobs and housing, the government in Washington should see to it that they do,	1	2	3	4	5	(20)
130. Pacifist demonstrations--picketing missile bases, peace walks, etc.--are harmful to the best interest of the American people.	1	2	3	4	5	(21)
131. Generally, I prefer to work with things rather than people.	1	2	3	4	5	(22)
132. The United States should give economic help to the poorer countries of the world even if they can't pay for it.	1	2	3	4	5	(23)
133. These days a person doesn't really know whom he can count on.	1	2	3	4	5	(24)
134. One of the best ways to improve colleges and universities is to increase the practical value of college courses.	1	2	3	4	5	(25)
135. In my opinion most criticisms of modern science are unwarranted and misdirected.	1	2	3	4	5	(26)
136. I believe in free speech for all no matter what their views might be.	1	2	3	4	5	(27)
137. When I go to the theater I enjoy seeing the ballet or similar imaginative performances.	1	2	3	4	5	(28)
138. The government in Washington ought to see to it that everybody who wants to work can find a job.	1	2	3	4	5	(29)
139. The U.S. has no moral right to carry its struggle against Communism to the point of risking the destruction of the human race.	1	2	3	4	5	(30)
140. I plan to be active in the cause of eliminating poverty and ghettos.	1	2	3	4	5	(31)
141. The United States should keep soldiers overseas where they can help countries that are against Communism.	1	2	3	4	5	(32)
142. Nowadays, a person has to live pretty much for today and let tomorrow take care of itself.	1	2	3	4	5	(33)
143. I would dislike managing a corporation or business enterprise.	1	2	3	4	5	(34)

Personal Orientations

	<u>Disagree</u>					<u>Agree</u>
144. A career in scientific research does not appeal to me.	1	2	3	4	5	(35)
145. Nobody has a right to tell another person what he should and should not read.	1	2	3	4	5	(36)
146. I am bored by recordings of the works of composers such as Bach and Beethoven.	1	2	3	4	5	(37)
147. The government ought to help people get doctors and hospital care at low cost.	1	2	3	4	5	(38)
148. It is contrary to my moral principles to participate in war and the killing of other people.	1	2	3	4	5	(39)
149. I don't blame anyone for trying to remain free from commitments to others.	1	2	3	4	5	(40)
150. The United States should give help to foreign countries even if they are not as much against Communism as we are.	1	2	3	4	5	(41)
151. In spite of what some people say, the lot of the average man is getting worse, not better.	1	2	3	4	5	(42)
152. An essential function of education is to prepare students for practical achievement and financial reward.	1	2	3	4	5	(43)
153. I enjoy problems which require me to draw my own conclusions from some data or a body of facts.	1	2	3	4	5	(44)
154. You can't really be sure whether an opinion is true or not unless people are free to argue against it.	1	2	3	4	5	(45)
155. I am interested in the historical development of art, music, and drama.	1	2	3	4	5	(46)
156. The government should leave things like electric power and housing for private businessmen to handle.	1	2	3	4	5	(47)
157. The real enemy today is no longer Communism but rather war itself.	1	2	3	4	5	(48)
158. I feel that I must be committed to helping other people, no matter what other goals I set for myself.	1	2	3	4	5	(49)
159. It's hardly fair to bring a child into the world with the way things look for the future.	1	2	3	4	5	(50)
160. I am more interested in the critical analysis of principles and theories than in their practical applications.	1	2	3	4	5	(51)
161. From the standpoint of a career field, I am more interested in the humanities than in the sciences.	1	2	3	4	5	(52)
162. Unless there is freedom for many points of view to be presented, there is little chance that the truth can ever be known.	1	2	3	4	5	(53)
163. It puzzles me why some people will so avidly read and discuss Shakespeare's plays.	1	2	3	4	5	(54)
164. Pacifism is simply not a practical philosophy in the world today.	1	2	3	4	5	(55)
165. I tend to be more realistic than idealistic, more occupied with knowing things as they are than with trying to change things.	1	2	3	4	5	(56)
166. I would enjoy doing an experiment designed to test a scientific theory.	1	2	3	4	5	(57)
167. I would not trust any person or group to decide what opinions can be freely expressed and what must be silenced.	1	2	3	4	5	(58)
168. I enjoy talking about music, theater, and other art forms with people who are interested in them.	1	2	3	4	5	(59)

Personal Orientations

	<u>Disagree</u>	<u>Agree</u>	
169. In my opinion American colleges and universities place too much emphasis upon education in the sciences.	1	2 3 4 5	(60)
170. Freedom of conscience should mean freedom to be an atheist as well as freedom to worship in the church of one's choice.	1	2 3 4 5	(61)
171. I find it hard to get interested in most of the great books in the history of human thought.	1	2 3 4 5	(62)

INSTRUCTIONS: Please indicate your responses to the following items by circling the number corresponding to the alternative that best expresses your position.

172. Do you feel that the U.S. is losing power in the world or is it becoming more powerful.
If LOSING POWER: How much does this disturb you--a great deal, somewhat, or very little?

Losing power, and disturbed a great deal.....	1	(63)
Losing power and disturbed somewhat.....	2	
Losing power and disturbed very little.....	3	
Becoming more powerful.....	4	
Staying the same.....	5	
Don't know.....	6	

173. Which of the statements below comes closest to expressing how you feel about the state of morals in this country at the present time?

They are pretty good and getting better.....	1	(64)
They are pretty good, but getting worse.....	2	
They are pretty bad, but getting better.....	3	
They are pretty bad, and getting worse.....	4	
Don't know, or the same as ever.....	5	

174. How do you feel about the following statement: "The Federal government is gradually taking away our basic freedoms."

Agree.....	1	(65)
Disagree.....	2	
Don't know.....	3	

175. How great a danger do you feel that American Communists are to this country at the present time--a very great danger, a great danger, some danger, hardly any danger, or no danger?

A very great danger.....	1	(66)
A great danger.....	2	
Some danger.....	3	
Hardly any danger.....	4	
No danger.....	5	
Don't know.....	6	

176. Do you agree or disagree with the statement, "In the past 25 years this country has moved dangerously close to Socialism."

Disagree.....	1	(67)
Agree.....	2	
Don't know.....	3	

Personal Orientations

177. Are you in favor of desegregation, strict segregation, or something in between?

- | | |
|---------------------|------|
| Desegregation.....1 | (68) |
| In between.....2 | |
| Segregation.....3 | |

178. Some people say that the government in Washington should see to it that white and colored children are allowed to go to the same schools. Others claim that this is not the government's business. Have you been concerned enough about this question to favor one side over the other?

- | | |
|------------|------|
| *Yes.....1 | (69) |
| No.....2 | |

*If YES, which of the following best expresses your position?

- | | |
|---|------|
| Favor school integration and mind made up.....1 | (70) |
| Favor school integration but have some reservations.....2 | |
| Against school integration but have some reservations.....3 | |
| Against school integration and mind made up.....4 | |

179. What if you had children the school board said must be taken a little farther from home by bus in order to achieve school integration. Do you feel you should go along with the decision, try to have it changed, or what?

- | | |
|------------------------------|------|
| Go along with decision.....1 | (71) |
| Not sure; it depends.....2 | |
| Try to change decision.....3 | |

180. Which of these statements would you agree with?

- | | |
|--|------|
| White people have a right to keep colored people out of their neighborhoods. Feel strongly.....1 | (72) |
| White people have a right to keep colored people out of their neighborhoods. Feel not too strongly.....2 | |
| Colored people have a right to live wherever they can afford to. Feel not too strongly.....3 | |
| Colored people have a right to live wherever they can afford to. Feel strongly.....4 | |
| Don't know; haven't made up mind about residential integration.....5 | |

181. Some people feel that if colored people are not getting fair treatment in jobs the government in Washington ought to see to it that they do. Others feel that this is not the federal government's business. Have you had enough interest in this question to favor one side over the other?

- | | |
|------------|------|
| *Yes.....1 | (73) |
| No.....2 | |

*If YES, which of the following best expresses your position?

- | | |
|--|------|
| Favor federal intervention to secure fair job treatment.....1 | (74) |
| With some reservations, favor federal intervention to secure fair job treatment.....2 | |
| With some reservations, oppose federal intervention to secure fair job treatment.....3 | |
| Oppose federal intervention to secure fair job treatment.....4 | |

Personal Orientations

182. Congress passed a bill that says that Negroes should have the right to go to any hotel or restaurant they can afford, just like white people. Some people feel that this is something the government in Washington should support. Others feel that the government should stay out of this matter. Have you been interested enough in this to favor one side over another?

*Yes.....1 (75)
No.....2

*If YES, which of the following best expresses your position?

Favor federal intervention to secure integrated public accommodations, and mind made up.....1 (76)
With some reservations, favor federal intervention to secure integrated public accommodations.....2
With some reservations, oppose federal intervention to secure integrated public accommodations.....3
Oppose federal intervention to secure integrated public accommodations.....4

183. Do you happen to belong to any organizations that sometimes take a stand on housing, better government, school problems, or other public issues?

No.....1 (7)
Yes.....2

184. When you get together with your friends would you say that you discuss political and social issues frequently, occasionally, or never?

*Frequently.....1 (8)
*Occasionally.....2
Never.....3

*If FREQUENTLY OR OCCASIONALLY, which of the statements below best describes the part you yourself take in these discussions with your friends?

Even though I have my own opinions, I usually just listen...1 (9)
Mostly I listen, but once in a while I express my opinion....2
I take an equal share in the conversation.....3
I do more than just hold up my end in the conversation;
I usually try to convince others that I am right.....4

185. Have you ever written or talked to your Congressman or Senator or other public officials to let them know what you would like them to do on a public issue you were interested in?

Yes, frequently.....1 (10)
Yes, occasionally.....2
No.....3

186. In the last four years have you worked for the election of any political candidate by doing things like distributing circulars or leaflets, making speeches, or calling on voters?

Yes, I worked intensively on occasions.....1 (11)
Yes, but only nominally.....2
No.....3

Personal Orientations

187. Have you attended any meetings in the last four years at which political speeches were made?

- Yes, frequently.....1 (12)
- Yes, occasionally.....2
- No.....3

188. In the last four years have you contributed money to a political party or to a candidate for a political office?

- Yes.....1 (13)
- No.....2

189. Which of the following do you consider important requirements for a satisfying job or career? (Circle one in each row.)

	Highly <u>important</u>	Moderately <u>important</u>	Slightly <u>important</u>	Un- <u>important</u>	
a. Provide me an opportunity to use my special abilities and aptitudes.....	1	2	3	4	(14)
b. Provide me with a chance to earn a good deal of money.....	1	2	3	4	(15)
c. Give me an opportunity to live and work in the world of ideas.....	1	2	3	4	(16)
d. Provide me an opportunity to work on the application of knowledge to practical affairs.....	1	2	3	4	(17)
e. Provide me an opportunity to work on theoretical problems regardless of practical value.....	1	2	3	4	(18)
f. Permit me to be creative and original....	1	2	3	4	(19)
g. Give me social status and prestige.....	1	2	3	4	(20)
h. Give me opportunities to work with people rather than with things.....	1	2	3	4	(21)
i. Enable me to look forward to a stable, secure future.....	1	2	3	4	(22)
j. Leave me relatively free of supervision by others.....	1	2	3	4	(23)
k. Give me a chance to exercise leadership..	1	2	3	4	(24)
l. Provide me with adventure.....	1	2	3	4	(25)
m. Give me an opportunity to be helpful to others.....	1	2	3	4	(26)

Important

You have now completed the questionnaire. Please fold it and return it in the enclosed stamped envelope to Project B, Department of Psychology, Vanderbilt University, Nashville, Tennessee 37203. Your replies to this questionnaire are completely confidential; absolutely no information of any kind about specific persons will be released to your school or to anyone else.

A report of this project will be sent to all respondents who complete each of the survey questionnaires; in addition, information will be sent to such respondents concerning scientific and professional journals in which more detailed accounts of the findings will be reported.

If you have comments on any of the issues covered in this questionnaire, please send them under separate cover to the above address.

THANK YOU FOR YOUR COOPERATION

SURVEY OF COLLEGE STUDENTS

Survey No. 2

Conducted under a Research Grant made to Vanderbilt University

Note: If you did not attend a college, university, or professional school during the past 1969-70 academic year we cannot use your response to this survey. In this event, won't you please check the box below, leave the remainder of the questionnaire blank, and return it in the enclosed envelope?

I did not attend school during the 1969-70 school year --

Please check the name and address on the label attached to the envelope in which you received this questionnaire. PLEASE MAKE SURE THE ADDRESS LISTED IS ONE AT WHICH YOU CAN RECEIVE MAIL ONE YEAR FROM NOW (SUMMER, 1971). If both are correct, skip to the marking instructions. If either should be corrected, please enter below the corrections to be made:

NAME _____
(Last Name) (First Name) (Middle Initial)

HOME ADDRESS _____
(Street Address) (City) (State) (Zip Code)

MARKING INSTRUCTIONS: This questionnaire will be key-punched; the numbers in parentheses on the right margin of each page are for the key-puncher and you should ignore them.

For most items, you should make your response by circling the number corresponding to the appropriate alternative. These numbers appear immediately after the rows of dots. Special instructions (required for particular questions) will be introduced as they are needed.

1. Write below the name of the college or university you attended during the past 1969-70 academic year.

(Name) (City) (State)

2. Is this the same college you attended in Fall, 1968? (Circle the number corresponding to your response.)

Yes. 1 (7)

No 2

3. Do you plan to be enrolled in a college or university this Fall (1970)? (Circle one.)

*Yes, I am continuing as a full-time student
this Fall. 1 (8)

*Yes, I am continuing, but as a part-time
student. 2

No, I have withdrawn from school and will
not be attending this Fall 3

*If YES: PLEASE ANSWER a and b.

- a. What class standing will you have this Fall? (Circle one.)

Sophomore. 1 (9)

Junior 2

Senior 3

Graduate student (or student in Law,
Medicine, or other professional school . 4

Item continued on following page.

- b. Will you be enrolled in the same university you attended during the past 1969-70 academic year? (Circle one.)

Yes 1 (10)
*No. 2

*If NO, what college or university will you be attending in Fall, 1970?

(Name) (City) (State)

4. Which of the following best describes where you lived during the past year? (Circle one.)

With my parents (or relatives) 1 (11)
Off-campus room, apartment house 2
Dormitory or other campus housing. 3
Fraternity or sorority. 4
Other (Circle and specify: _____) 5

5. Are you married? (Circle one.)

*Yes 1 (12)
No 2

*If YES, when were you married? _____

6. During the past academic year (including any summer sessions you attended this year) how many hours of credit did you earn? (Write the number in the space provided.)

_____ hours (13-14)

7. From the following list, circle the two-digit number corresponding to your major field of study during the last year. If you have not yet had to declare a major, circle the number of the field which you intended during the past year to declare as your major field of study. If you had a joint major field of study, circle the numbers of each department involved, but place an asterisk (*) beside the number of the main department.

Agriculture and/or Forestry.....01

Architecture and/or Design.....02

Biological Sciences (General Biology).03

Bacteriology, Molecular Biology,

Microbiology.....04

Biochemistry.....05

General Botany.....06

General Zoology.....07

Other Biological sciences.....08

Business, Commerce and Management.....09

Education.....10

Elementary and/or secondary.....11

Foundations.....12

Educational Psychology and

counseling.....13

Educational Administration.....14

Other Education fields.....15

Engineering.....16

Chemical.....17

Civil.....18

Electrical.....19

Mechanical.....20

Other Engineering fields.....21

Fine Arts.....22

Art.....23

Dramatics and Speech.....24

Other Fine Arts.....25

Home Economics.....31 (15-16)

Humanities.....32

English language & literature.....33

Foreign languages & literature....34

Classical languages.....35

French.....36

German.....37

Spanish.....38

Other foreign languages

(including linguistics).....39

History 40

Philosophy.....41

Religion & Theology.....42

Other Humanities fields.....43

Journalism.....44

Library Science.....45

Mathematics and Statistics.....46

Physical & Health Education.....47

Physical Sciences.....48

Chemistry.....49

Physics.....50

Other physical sciences.....51

Pre-law or Law (use this code only

if this is a recognized major

field of study at your school)....52

Item continued on following page

Geography.....	26	Psychology.....	53
Health Fields.....	27	Social Sciences.....	54
Nursing.....	28	Anthropology & Archaeology.....	55
Pre-medicine or Medicine (use this code only if this is a recognized major field of study at your school)	29	Economics.....	56
Other health fields.....	30	Political Science, Government.....	57
		Sociology.....	58
		Other social sciences.....	59
		All other fields.....	60

8. Of the total number of credit-hours you have described in Item 6, how many of them were earned in the same broad field of study which includes your major field during the past year? (Broad fields of study are underlined in Item 7.) For example, if your specific major was Chemical Engineering, you should indicate below the total number of credit-hours you earned in all engineering courses last year.)

_____ hours

(17-18)

9. What are your educational plans for the future?

Circle the number corresponding to the highest level of education you expect to complete. If you do not plan to seek any more higher education, circle the number of the alternative most closely corresponding to the highest level of education you have already completed.

- I expect to complete two or three years of college.....1 (19)
- I expect to get a bachelor's degree.....2
- I expect to do some graduate study but not enough for an advanced degree....3
- I expect to get a Master's degree.....4
- I expect to obtain a first-professional degree (M.D., D.D.S., L.L.B., or B.D.)5
- I expect to obtain a Ph.D. or other equivalent academic doctorate degree....6

10. In which of the following extracurricular groups have you been an active participant during the past academic year? (Circle as many as apply.)

- Afro-American studies group (or related concerns).....1 (20)
- Campus group concerned with supporting an organized political party or a political candidate.....2 (21)
- Campus group concerned with local issues (parietal hours, women's curfew hours, etc.).....3 (22)
- Campus group concerned with national or world issues (SDS, Vietnam Committee, Draft Committee, etc.).....4 (23)
- Editorial staff or campus publications.....5 (24)
- Fraternity (active member, etc.).....6 (25)
- Pre-professional student association (Engineering Assn., Pre-med. club, etc.)7 (26)
- Student government organization.....8 (27)
- Other (Circle and specify: _____).....9 (28)

11. Please indicate your:

- (a) race: _____ (29)
- (b) religion: _____ (30)
- (c) present political party affiliation (indicate the political party with which you identify most): _____ (31)

12. Has your campus experienced any student protests or demonstrations during the past academic year?

*Yes.....1 (32)
No.....2

*If YES: PLEASE ANSWER a and b BELOW:

- a. Briefly describe the main goals of the most memorable demonstration on your campus during the past year: _____ (33)

- b. How would you characterize your attitude toward this demonstration on your campus. (34)

Strongly approved.....1
Approved but with reservations.....2
Can't decide; haven't made up mind.....3
Disapprove but with reservations.....4
Strongly disapprove.....5

13. During the past year have you been active in civil rights, political, social action, or other demonstrations?

*Yes, very active.....1 (35)
*Yes, moderately active.....2
No, only nominally.....3
No, I haven't been involved at all.....4

*If YES: Briefly describe the main goals of the demonstrations in which you have been active:

_____ (36)

14. During the past academic year did you participate in any Moritorium activities or student strikes?

*Yes.....1 (37)
No.....2

*If YES, check the appropriate descriptive phrases below which indicate how you participated (check as many as are appropriate):

Cut one or more classes in observance of protest.....1 (38)
Attended a rally or seminar.....2 (39)
Attended all the scheduled activities.....3 (40)
Helped to plan and organize the activities....4 (41)
Other (Please specify: _____).....5 (42)

15. Listed below are a number of awards and honors. Which of these have you received during the past year? (Circle as many as apply.)

Named on Dean's list.....1 (43)

Elected to Phi Beta Kappa or other honor society based on academic achievement.....2 (44)

Item continued on following page

Won scholarship based on academic record.....3	(45)
Won prize or award for literary, musical, or artistic work.....4	(46)
Won prize or award for scholarship or research work (e.g., "Smith prize for best biology experiment")....5	(47)
Other award or honor (Circle and specify: _____).....6	(48)
No special honors.....7	(49)

Descriptions of Your University Environment

NOTE: The purpose of this section is to obtain information about your university environment during the past school year.

Although you answered a similar set of items last year, your environment has undoubtedly changed in several respects since you last reported. We want to study permanence and change in college environments and to relate such changes to the development of student attitudes and career plans. So please complete the following items even though many of them are similar to items in the survey you completed last year.

You are asked to be a reporter about those parts of your university you have known best. You have lived in a particular environment, participated in its activities, seen its features, and sensed its expectations and demands. What kind of place was it?

Remember, your responses will be kept confidential; no person, except those working on this research project, will ever see your responses. Your responses will not be used to evaluate your teachers, your fellow students, or your university. They will be used only to study the effects of different environments upon career plans and attitudes. There are no "right" or "wrong" answers; so please answer the questions honestly and try to estimate the degree to which the statements below characterized your university environment last year.

INSTRUCTIONS FOR PART A: Statements in PART A are about faculty members with whom you have had most of your courses or have known best during the past year--their courses and teaching methods, their values and emphases, and their formal and informal interactions with you. The ratings you make here may or may not correspond to the ratings you would make of faculty members in other parts of the college or university. We do not want you to describe all faculty members in your school. Think only of the teachers with whom you have had most of your courses or known best during the past year. We want you to describe their behavior and the effects of their behavior upon you.

DIRECTIONS: Please rate your teachers according to the degree to which each of the following statements describes their behavior, or the effects of their behavior upon you. The numbers in the rating scale should be interpreted as follows:

- 1 -- Strongly disagree; highly uncharacteristic and almost always false as a description of them.
- 2 -- Mostly disagree; mostly false as a description of them.
- 3 -- Neither agree nor disagree; true about as often as it was false as a description of them.
- 4 -- Mostly agree; mostly true as a description of them.
- 5 -- Strongly agree; highly characteristic and almost always true as a description of them.

CIRCLE THE NUMBER WHICH CORRESPONDS TO YOUR RATING FOR EACH DESCRIPTION

How the rating scale is to be used can be illustrated with the following statement:

"The faculty participated with students in many out-of-class activities."

If you should "mostly agree" that this statement characterized your teachers last year you would mark as follows:

The faculty participated with students in many out-of-class activities.	<table style="display: inline-table; border: none;"> <tr> <td style="text-align: center;">Disagree</td> <td style="text-align: center;">Agree</td> </tr> <tr> <td style="text-align: center;">1 2 3</td> <td style="text-align: center;">4 5</td> </tr> </table>	Disagree	Agree	1 2 3	4 5
Disagree	Agree				
1 2 3	4 5				

PLEASE ANSWER EVERY ITEM IN PART A

PART A -- DESCRIPTIONS OF FACULTY MEMBERS

	<u>Disagree</u>					<u>Agree</u>
16. They often stressed the limited usefulness of the concepts and methods of science.	1	2	3	4	5	(7)
17. They encouraged students to do graduate work.	1	2	3	4	5	(8)
18. They offered many really practical courses designed to prepare the student for his occupation.	1	2	3	4	5	(9)
19. They showed no interest in tracing the sources of their specialized field of study to philosophical or humanistic movements in the history of ideas.	1	2	3	4	5	(10)
20. They were sensitive to student complaints and grievances and frequently tried to remedy the situation.	1	2	3	4	5	(11)
21. They were not unusually skillful in getting to know students as individuals.	1	2	3	4	5	(12)
22. They stressed the value of the objective methods of science in finding answers to empirical questions.	1	2	3	4	5	(13)
23. They spent little or no time counseling students about opportunities for graduate study in their field.	1	2	3	4	5	(14)
24. They rarely tried to give the student the practical training he will need in his career field.	1	2	3	4	5	(15)
25. They frequently encouraged students to take courses in the humanities.	1	2	3	4	5	(16)
26. Students having difficulty with their courses could not expect to get special tutoring or counsel from them.	1	2	3	4	5	(17)
27. They really talked <u>with</u> the students, not just at them.	1	2	3	4	5	(18)
28. They sometimes criticized the trivial problems on which many scientists choose to work.	1	2	3	4	5	(19)
29. They showed little interest in recruiting students into their field of study.	1	2	3	4	5	(20)
30. Very few of their courses were aimed at preparing the student for his vocation.	1	2	3	4	5	(21)
31. They seemed to have very little interest in drama or the arts.	1	2	3	4	5	(22)
32. They expected the undergraduate to get by almost completely on his own resources.	1	2	3	4	5	(23)
33. They took a personal interest in me and my work.	1	2	3	4	5	(24)
34. They encouraged student interest in understanding developments in modern science.	1	2	3	4	5	(25)
35. They tried to persuade qualified students to seek advanced training in their field of study.	1	2	3	4	5	(26)
36. They frequently expressed the belief that the main purpose of college is to prepare the student for his vocation.	1	2	3	4	5	(27)
37. They tried to get students interested in the humanities.	1	2	3	4	5	(28)
38. Their counseling and guidance were really personal, patient, and extensive.	1	2	3	4	5	(29)
39. I never got to know any of them well enough to count them as good friends.	1	2	3	4	5	(30)
40. It was obvious that they believed the American college has over-emphasized education in the sciences.	1	2	3	4	5	(31)

PART A -- DESCRIPTIONS OF FACULTY MEMBERS

	<u>Disagree</u>			<u>Agree</u>			
41. They taught their courses as if most of their students were going into graduate study.	1	2	3	4	5	(32)	
42. Their courses tended to make students more practical and realistic.	1	2	3	4	5	(33)	
43. Student interest in understanding and criticizing important works in art, music, and drama was encouraged by the faculty.	1	2	3	4	5	(34)	
44. They tried to restrict appointments for planning study programs to one or two periods of the year.	1	2	3	4	5	(35)	
45. They were typically warm and friendly in their relations with me.	1	2	3	4	5	(36)	
46. They frequently encouraged students to take elective courses in the sciences.	1	2	3	4	5	(37)	
47. They did not present much information about careers in their field of study.	1	2	3	4	5	(38)	
48. Very few of their courses here will be useful to students who go into business or industry.	1	2	3	4	5	(39)	
49. They had little appreciation for scholarship in the humanities.	1	2	3	4	5	(40)	
50. They often discussed the students' goals with them and tried to help them discover their special talents.	1	2	3	4	5	(41)	
51. They seemed to feel that teachers should maintain a certain amount of "emotional distance" from students.	1	2	3	4	5	(42)	
52. Are most of the faculty members you have just described in your major field of study as described in Item 7?							
	Yes.....1			(43)			
	No.....2						

PART B -- DESCRIPTIONS OF STUDENT ASSOCIATES

INSTRUCTIONS FOR PART B: Statements in PART B are about the university student colleagues you knew best during the past year. Your answers to this part should tell us what was generally characteristic of the students you knew best, identified with, or associated with most commonly during the past year. The ratings you make for your personal associates in your school may or may not correspond to the way you would rate students in general or other groups of students at your university.

Describe only those students you knew best and associated with most commonly during the past year. They may be students in your major field, living quarters, or other campus groups.

DIRECTIONS: Follow the same rating directions shown for Part A.

PLEASE ANSWER EVERY ITEM IN PART B

	<u>Disagree</u>			<u>Agree</u>			
53. They had strong interest in poetry, music, painting, sculpture, architecture, etc.	1	2	3	4	5	(7)	
54. Most of them felt their teachers had helped them to achieve greater direction, force, and clarity.	1	2	3	4	5	(8)	
55. We rarely had much time for play or recreation.	1	2	3	4	5	(9)	
56. Books dealing with psychological problems or personal values were widely read and discussed by them.	1	2	3	4	5	(10)	
57. They were continually urging others to write their Congressman or Senator or other public officials to let them know what we wanted them to do on a public issue.	1	2	3	4	5	(11)	
58. Few of them were eager to go out and start working in the practical world.	1	2	3	4	5	(12)	
59. Many of them owned sports cars.	1	2	3	4	5	(13)	
60. They talked frequently about the philosophy and methods of science.	1	2	3	4	5	(14)	

PART B -- DESCRIPTIONS OF STUDENT ASSOCIATES

	Disagree			Agree			
61. They felt that students should be actively engaged in solving social problems.	1	2	3	4	5	(15)	
62. Most of my friends were planning to enter careers which required graduate or professional degrees.	1	2	3	4	5	(16)	
63. They felt that students should be given greater responsibility for their own education and given greater freedom in designing their courses of study.	1	2	3	4	5	(17)	
64. They would regard a student who insisted on analyzing and classifying art and music as a little odd.	1	2	3	4	5	(18)	
65. They were generally dissatisfied and disappointed with their teachers.	1	2	3	4	5	(19)	
66. Their parties were frequent and a lot of fun.	1	2	3	4	5	(20)	
67. They had very little interest in the analysis of value systems, and the relativity of societies and ethics.	1	2	3	4	5	(21)	
68. They felt that political activities by students had no place on a college campus.	1	2	3	4	5	(22)	
69. They often complained that their college courses were not giving them the practical training they will need in their career fields.	1	2	3	4	5	(23)	
70. Most of them came from wealthy families.	1	2	3	4	5	(24)	
71. They would have very little interest in attending a lecture by a prominent scientist.	1	2	3	4	5	(25)	
72. Mostly they felt it was not the university's role to solve all of society's problems.	1	2	3	4	5	(26)	
73. Few of them were seriously considering occupations which demand advanced graduate or professional training.	1	2	3	4	5	(27)	
74. Mostly they felt that demonstrations to demand greater student power had no place on a college campus.	1	2	3	4	5	(28)	
75. A lecture by an outstanding poet or dramatist would attract very few of them.	1	2	3	4	5	(29)	
76. Most of my associates were grateful to the faculty for showing them a way of life worthy of imitation.	1	2	3	4	5	(30)	
77. Our gathering places were typically active and noisy.	1	2	3	4	5	(31)	
78. They would have little interest in a lecture by a visiting philosopher or theologian.	1	2	3	4	5	(32)	
79. During the last year they took on a heavy load of active political work in support of their issues and candidates.	1	2	3	4	5	(33)	
80. They often talked about the jobs that will be available to them after graduation from college.	1	2	3	4	5	(34)	
81. Many of them had to work part-time to pay their college expenses.	1	2	3	4	5	(35)	
82. They rarely took any more science courses than were required.	1	2	3	4	5	(36)	
83. They often complained that their course work was not relevant to contemporary life and problems.	1	2	3	4	5	(37)	
84. None of them had much interest in doing research in their field of study.	1	2	3	4	5	(38)	

PART B -- DESCRIPTIONS OF STUDENT ASSOCIATES

	<u>Disagree</u>					<u>Agree</u>
85. Most of them believed that drastic changes are desirable in order to increase student participation in decision-making in the university.	1	2	3	4	5	(39)
86. When they got together they often talked about trends in art, music, or the theater.	1	2	3	4	5	(40)
87. They were often caught up in the contagious enthusiasms of their teachers.	1	2	3	4	5	(41)
88. There weren't many opportunities for us to get together in extracurricular activities.	1	2	3	4	5	(42)
89. They frequently debated social and political problems far into the night.	1	2	3	4	5	(43)
90. Generally speaking, they had little or no interest in politics.	1	2	3	4	5	(44)
91. They tended to look down on students who insisted on evaluating courses in terms of how well they prepared one for a job.	1	2	3	4	5	(45)
92. Few of them ever expected to become wealthy.	1	2	3	4	5	(46)
93. Most of my friends had strong interests in science and mathematics.	1	2	3	4	5	(47)
94. They had little or no interest in working with volunteers on ameliorative community projects.	1	2	3	4	5	(48)
95. Many of them had a strong desire to contribute to their field of study.	1	2	3	4	5	(49)
96. They had little sympathy for student power advocates who disrupt the functioning of the university.	1	2	3	4	5	(50)
97. They often went to concerts and art exhibits when they were available.	1	2	3	4	5	(51)
98. They had strategies for helping each other to meet the faculty's requirements with less work.	1	2	3	4	5	(52)
99. We seldom went to movies, parties, etc., on the spur of the moment.	1	2	3	4	5	(53)
100. Long, serious philosophical discussions were common among them.	1	2	3	4	5	(54)
101. They felt obliged to participate at every opportunity in the political process.	1	2	3	4	5	(55)
102. They were more concerned about taking interesting courses than courses directly useful in their vocations.	1	2	3	4	5	(56)
103. They were accustomed to having plenty of money.	1	2	3	4	5	(57)
104. Few, if any, of them would like to engage in scientific research.	1	2	3	4	5	(58)
105. Many of them felt that education would be improved if students were required to spend a year in community service at home or abroad.	1	2	3	4	5	(59)
106. They had little interest in pursuing careers involving research or scholarship.	1	2	3	4	5	(60)
107. They often argued that students should have greater control of faculty appointments and promotions.	1	2	3	4	5	(61)
108. They seemed to have little appreciation for the fine or applied arts.	1	2	3	4	5	(62)
109. They sometimes ridiculed the faculty's mannerisms and ideas with wild caricatures.	1	2	3	4	5	(63)

PART B -- DESCRIPTIONS OF STUDENT ASSOCIATES

	<u>Disagree</u>					<u>Agree</u>	
110. Everyone of us had a lot of fun in college.	1	2	3	4	5		(64)
111. They never talked very much about ethical perplexities.	1	2	3	4	5		(65)
112. They were inclined to believe that student political activity was a waste of time since it has little or no effect upon government.	1	2	3	4	5		(66)
113. Most of them believed that the main goal of a college education is to prepare the student for his vocational career.	1	2	3	4	5		(67)
114. They tended to evaluate future jobs in terms of their intrinsic interest and had little concern about whether they offered one a chance to earn a great deal of money.	1	2	3	4	5		(68)
115. Most of them were planning careers in science.	1	2	3	4	5		(69)
116. They would be suspicious of students who continually insisted that the university must become more responsive to public demands.	1	2	3	4	5		(70)
117. I expect some of them to become eminent persons in their major fields of study.	1	2	3	4	5		(71)
118. They had little or no interest in having students participate in determining undergraduate admissions policies.	1	2	3	4	5		(72)
119. Which group of student colleagues have you been mostly describing? (Circle as many as apply.)							
Students in my major field of study.....1							(73)
Campus group concerned with political or social issues.... Please specify type of group:.....2							(74)
Fraternity friends.....3							(75)
Dormitory or living quarters group.....4							(76)
Other (Circle and specify:.....5							(77)

Personal Orientations

INSTRUCTIONS: In the following items you are asked to report your own attitudes, opinions, and feelings regarding a variety of subjects. We are interested in how you feel about these subjects at the present time. Remember your answers will be held in the strictest confidence. We are interested only in statistical relationships and will under no circumstances report responses on an individual or university basis.

Please indicate your agreement or disagreement with each of the following statements. Circle the number corresponding to your degree of agreement with each statement; numbers on the rating scale should be interpreted as follows:

- 1 -- Strongly disagree
- 2 -- Disagree with reservations
- 3 -- Can't decide; agree as much as disagree
- 4 -- Agree with reservations
- 5 -- Strongly agree

PLEASE ANSWER EVERY ITEM IN THIS SECTION

	<u>Disagree</u>					<u>Agree</u>	
120. An important goal for me is being efficient and successful in practical affairs.	1	2	3	4	5		(7)
121. If I were a university professor and had the necessary ability, I would prefer to teach science courses rather than poetry.	1	2	3	4	5		(8)
122. People who hate our way of life should still have a chance to talk and be heard.	1	2	3	4	5		(9)
123. I would enjoy being an actor on the stage.	1	2	3	4	5		(10)
124. If cities and towns around the country need help to build more schools, the government in Washington ought to give them the money they need.	1	2	3	4	5		(11)

Personal Orientations

	Disagree			Agree			
125. The U. S. must be willing to run any risk of war which may be necessary to prevent the spread of Communism.	1	2	3	4	5	(12)	
126. One of the most important goals of higher education should be to prepare students to aid disadvantaged persons.	1	2	3	4	5	(13)	
127. This country would be better off if we just stayed home and did not concern ourselves with problems in other parts of the world.	1	2	3	4	5	(14)	
128. Most public officials are not really interested in the problems of the average man.	1	2	3	4	5	(15)	
129. I enjoy participating in long, serious philosophical discussions.	1	2	3	4	5	(16)	
130. Scientific or mathematical articles do not appeal to me.	1	2	3	4	5	(17)	
131. No matter what a person's political beliefs are, he is entitled to the same legal rights and protections as anyone else.	1	2	3	4	5	(18)	
132. I don't care much for going to art galleries and looking at collections of sculpture and paintings.	1	2	3	4	5	(19)	
133. If Negroes are not getting fair treatment in jobs and housing, the government in Washington should see to it that they do.	1	2	3	4	5	(20)	
134. Pacifist demonstrations--picketing missile bases, peace walks, etc.--are harmful to the best interest of the American people.	1	2	3	4	5	(21)	
135. Generally, I prefer to work with things rather than people.	1	2	3	4	5	(22)	
136. The United States should give economic help to the poorer countries of the world even if they can't pay for it.	1	2	3	4	5	(23)	
137. These days a person doesn't really know whom he can count on.	1	2	3	4	5	(24)	
138. One of the best ways to improve colleges and universities is to increase the practical value of college courses.	1	2	3	4	5	(25)	
139. In my opinion most criticisms of modern science are unwarranted and misdirected.	1	2	3	4	5	(26)	
140. I believe in free speech for all no matter what their views might be.	1	2	3	4	5	(27)	
141. When I go to the theater I enjoy seeing the ballet or similar imaginative performances.	1	2	3	4	5	(28)	
142. The government in Washington ought to see to it that everybody who wants to work can find a job.	1	2	3	4	5	(29)	
143. The U. S. has no moral right to carry its struggle against Communism to the point of risking the destruction of the human race.	1	2	3	4	5	(30)	
144. I plan to be active in the cause of eliminating poverty and ghettos.	1	2	3	4	5	(31)	
145. The United States should keep soldiers overseas where they can help countries that are against Communism.	1	2	3	4	5	(32)	
146. Nowadays, a person has to live pretty much for today and let tomorrow take care of itself.	1	2	3	4	5	(33)	
147. I would dislike managing a corporation or business enterprise.	1	2	3	4	5	(34)	
148. A career in scientific research does not appeal to me.	1	2	3	4	5	(35)	
149. Nobody has a right to tell another person what he should and should not read.	1	2	3	4	5	(36)	

Personal Orientations

	Disagree			Agree			
150. I am bored by recordings of the works of composers such as Bach and Beethoven.	1	2	3	4	5	(37)	
151. The government ought to help people get doctors and hospital care at low cost.	1	2	3	4	5	(38)	
152. It is contrary to my moral principles to participate in war and the killing of other people.	1	2	3	4	5	(39)	
153. I don't blame anyone for trying to remain free from commitments to others.	1	2	3	4	5	(40)	
154. The United States should give help to foreign countries even if they are not as much against Communism as we are.	1	2	3	4	5	(41)	
155. In spite of what some people say, the lot of the average man is getting worse, not better.	1	2	3	4	5	(42)	
156. An essential function of education is to prepare students for practical achievement and financial reward.	1	2	3	4	5	(43)	
157. I enjoy problems which require me to draw my own conclusions from some data or a body of facts.	1	2	3	4	5	(44)	
158. You can't really be sure whether an opinion is true or not unless people are free to argue against it.	1	2	3	4	5	(45)	
159. I am interested in the historical development of art, music, and drama.	1	2	3	4	5	(46)	
160. The government should leave things like electric power and housing for private businessmen to handle.	1	2	3	4	5	(47)	
161. The real enemy today is no longer Communism but rather war itself.	1	2	3	4	5	(48)	
162. I feel that I must be committed to helping other people, no matter what other goals I set for myself.	1	2	3	4	5	(49)	
163. It's hardly fair to bring a child into the world with the way things look for the future.	1	2	3	4	5	(50)	
164. I am more interested in the critical analysis of principles and theories than in their practical applications.	1	2	3	4	5	(51)	
165. From the standpoint of a career field, I am more interested in the humanities than in the sciences.	1	2	3	4	5	(52)	
166. Unless there is freedom for many points of view to be presented, there is little chance that the truth can ever be known.	1	2	3	4	5	(53)	
167. It puzzles me why some people will so avidly read and discuss Shakespeare's plays.	1	2	3	4	5	(54)	
168. Pacifism is simply not a practical philosophy in the world today.	1	2	3	4	5	(55)	
169. I tend to be more realistic than idealistic, more occupied with knowing things as they are than with trying to change things.	1	2	3	4	5	(56)	
170. I would enjoy doing an experiment designed to test a scientific theory.	1	2	3	4	5	(57)	
171. I would not trust any person or group to decide what opinions can be freely expressed and what must be silenced.	1	2	3	4	5	(58)	
172. I enjoy talking about music, theater, and other art forms with people who are interested in them.	1	2	3	4	5	(59)	

Personal Orientations

	<u>Disagree</u>			<u>Agree</u>			
173. In my opinion American colleges and universities place too much emphasis upon education in the sciences.	1	2	3	4	5		(60)
174. Freedom of conscience should mean freedom to be an atheist as well as freedom to worship in the church of one's choice.	1	2	3	4	5		(61)
175. I find it hard to get interested in most of the great books in the history of human thought.	1	2	3	4	5		(62)

INSTRUCTIONS: Please indicate your responses to the following items by circling the number corresponding to the alternative that best expresses your position.

176. Do you feel that the U. S. is losing power in the world or is it becoming more powerful.
If LOSING POWER: How much does this disturb you--a great deal, somewhat, or very little?
- Losing power, and disturbed a great deal.....1 (63)
- Losing power and disturbed somewhat.....2
- Losing power and disturbed very little.....3
- Becoming more powerful.....4
- Staying the same.....5
- Don't know.....6
177. Which of the statements below comes closest to expressing how you feel about the state of morals in this country at the present time?
- They are pretty good and getting better.....1 (64)
- They are pretty good, but getting worse.....2
- They are pretty bad, but getting better.....3
- They are pretty bad, and getting worse.....4
- Don't know, or the same as ever.....5
178. How do you feel about the following statement: "The Federal government is gradually taking away our basic freedoms."
- Agree.....1 (65)
- Disagree.....2
- Don't know.....3
179. How great a danger do you feel that American Communists are to this country at the present time--a very great danger, a great danger, some danger, hardly any danger, or no danger?
- A very great danger.....1 (66)
- A great danger.....2
- Some danger.....3
- Hardly any danger.....4
- No danger.....5
- Don't know.....6
180. Do you agree or disagree with the statement, "In the past 25 years this country has moved dangerously close to Socialism."
- Disagree.....1 (67)
- Agree.....2
- Don't know.....3

Personal Orientations

181. Are you in favor of desegregation, strict segregation, or something in between?

- | | |
|---------------------|------|
| Desegregation.....1 | (68) |
| In between.....2 | |
| Segregation.....3 | |
-

182. Some people say that the government in Washington should see to it that white and Negro children are allowed to go to the same schools. Others claim that this is not the government's business. Have you been concerned enough about this question to favor one side over the other?

- | | |
|------------|------|
| *Yes.....1 | (69) |
| No.....2 | |
-

*If YES, which of the following best expresses your position?

- | | |
|---|------|
| Favor school integration and mind made up.....1 | (70) |
| Favor school integration but have some reservations.....2 | |
| Against school integration but have some reservations.....3 | |
| Against school integration and mind made up.....4 | |
-

183. What if you had children the school board said must be taken a little farther from the bus in order to achieve school integration. Do you feel you should go along with the decision, try to have it changed, or what?

- | | |
|------------------------------|------|
| Go along with decision.....1 | (71) |
| Not sure; it depends.....2 | |
| Try to change decision.....3 | |
-

184. Which of these statements would you agree with?

- | | |
|---|------|
| Whites have a right to keep Negroes out of their neighborhoods. Feel strongly.....1 | (72) |
| Whites have a right to keep Negroes out of their neighborhoods. Feel not too strongly.....2 | |
| Negroes have a right to live wherever they can afford to. Feel not too strongly.....3 | |
| Negroes have a right to live wherever they can afford to. Feel strongly.....4 | |
| Don't know; haven't made up mind about residential integration.....5 | |
-

185. Some people feel that if Negroes are not getting fair treatment in jobs the government in Washington ought to see to it that they do. Others feel that this is not the federal government's business. Have you had enough interest in this question to favor one side over the other?

- | | |
|------------|------|
| *Yes.....1 | (73) |
| No.....2 | |
-

*If YES, which of the following best expresses your position?

- | | |
|--|------|
| Favor federal intervention to secure fair job treatment....1 | (74) |
| With some reservations, favor federal intervention to secure fair job treatment.....2 | |
| With some reservations, oppose federal intervention to secure fair job treatment.....3 | |
| Oppose federal intervention to secure fair job treatment...4 | |
-

Personal Orientations

186. Congress passed a bill that says that Negroes should have the right to go to any hotel or restaurant they can afford, just like white people. Some people feel that this is something the government in Washington should support. Others feel that the government should stay out of this matter. Have you been interested enough in this to favor one side over another?

*Yes.....1 (75)
No.....2

*If YES, which of the following best expresses your position?

Favor federal intervention to secure integrated public accommodations, and mind made up.....1 (76)
With some reservations, favor federal intervention to secure integrated public accommodations.....2
With some reservations, oppose federal intervention to secure integrated public accommodations.....3
Oppose federal intervention to secure integrated public accommodations.....4

187. Do you happen to belong to any organizations that sometimes take a stand on housing, better government, school problems, or other public issues?

No.....1 (7)
Yes.....2

188. When you get together with your friends would you say that you discuss political and social issues frequently, occasionally, or never?

*Frequently.....1 (8)
*Occasionally.....2
Never.....3

*If FREQUENTLY OR OCCASIONALLY, which of the statements below best describes the part you yourself take in these discussions with your friends?

Even though I have my own opinions, I usually just listen.....1 (9)
Mostly I listen, but once in a while I express my opinion.....2
I take an equal share in the conversation.....3
I do more than just hold up my end in the conversation; I usually try to convince others that I am right.....4

189. Have you ever written or talked to your Congressman or Senator or other public officials to let them know what you would like them to do on a public issue you were interested in?

Yes, frequently.....1 (10)
Yes, occasionally.....2
No.....3

190. In the last four years have you worked for the election of any political candidate by doing things like distributing circulars or leaflets, making speeches, or calling on voters?

Yes, I worked intensively on occasions.....1 (11)
Yes, but only nominally.....2
No.....3

Personal Orientations

191. Have you attended any meetings in the last four years at which political speeches were made?

- Yes, frequently.....1 (12)
 Yes, occasionally.....2
 No.....3

192. In the last four years have you contributed money to a political party or to a candidate for a political office?

- Yes.....1 (13)
 No.....2

193. Which of the following do you consider important requirements for a satisfying job or career? (Circle one in each row.)

	Highly important	Moderately important	Slightly important	Un- important	
a. Provide me an opportunity to use my special abilities and aptitudes.....	1	2	3	4	(14)
b. Provide me with a chance to earn a good deal of money.....	1	2	3	4	(15)
c. Give me an opportunity to live and work in the world of ideas.....	1	2	3	4	(16)
d. Provide me an opportunity to work on the application of knowledge to practical affairs.....	1	2	3	4	(17)
e. Provide me an opportunity to work on theoretical problems regardless of practical value.....	1	2	3	4	(18)
f. Permit me to be creative and original....	1	2	3	4	(19)
g. Give me social status and prestige.....	1	2	3	4	(20)
h. Give me opportunities to work with people rather than with things.....	1	2	3	4	(21)
i. Enable me to look forward to a stable, secure future.....	1	2	3	4	(22)
j. Leave me relatively free of supervision by others.....	1	2	3	4	(23)
k. Give me a chance to exercise leadership..	1	2	3	4	(24)
l. Provide me with adventure.....	1	2	3	4	(25)
m. Give me an opportunity to be helpful to others.....	1	2	3	4	(26)

Important

You have now completed the questionnaire. Please fold it and return it in the enclosed stamped envelope to Project B, Department of Psychology, Vanderbilt University, Nashville, Tennessee 37203. Your replies to this questionnaire are completely confidential; absolutely no information of any kind about specific persons will be released to your school or to anyone else.

A report of this project will be sent to all respondents who complete each of the survey questionnaires; in addition, information will be sent to such respondents concerning scientific and professional journals in which more detailed accounts of the findings will be reported.

If you have comments on any of the issues covered in this questionnaire, please send them under separate cover to the above address.

THANK YOU FOR YOUR COOPERATION

Survey No. 3

Conducted under a Research Grant made to Vanderbilt University

--

NAME _____
(Last Name) (First Name) (Middle Initial)

HOME ADDRESS _____
 (Street Address) (City) (State) (Zip Code)

For most items, you should make your response by circling the number corresponding to the appropriate alternative. These numbers appear immediately after the rows of dots. Special instructions (required for particular questions) will be introduced as they are needed.

1. Which of the following best describes where you lived during the past year? (Circle one.)

With my parents (or relatives) 1 (7)
 Rented room, apartment, or house 2
 Dormitory or other campus housing . . . 3
 Fraternity or sorority 4
 Other (Circle and specify:) 5

2. Are you married? (Circle one.)

[illegible]

*If YES, when were you married?

3. What are your educational plans for the future?

Circle the number corresponding to the highest level of education you expect to complete. If you do not plan to seek any more higher education, circle the number of the alternative most closely corresponding to the highest level of education you have already completed.

I expect to complete two or three years of college.....	1	(9)
I expect to get a bachelor's degree.....	2	
I expect to do some graduate study but not enough for an advanced degree.....	3	
I expect to get a Master's degree.....	4	
I expect to obtain a first-professional degree (M.D., D.D.S., L.L.B., or B.D.)..	5	
I expect to obtain a Ph.D. or other equivalent academic doctorate degree.....	6	

4. Did you attend a college, university, or professional school during the past 1970-71 academic year?

Yes..... 1 (10)

*No..... 2

Item continued on following page.

*If NO, PLEASE ANSWER a, b, and c below:

a. Did you obtain your Bachelor's degree before September 1, 1970?

Yes.....1 (11)

No.....2

b. What was your occupation during the last six months?

Job (Circle and specify:.....).....1 (12)

Military service (When did you enter?.....)..2

Other (Circle and specify:.....).....3

c. Was your occupation during the last six months one for which you were trained in your major field of study in college?

Yes; it was directly related.....1 (13)

Yes and no; it was only partly related.....2

No; it was unrelated.....3

If you answered "NO" to item 4 and have completed a, b, and c, skip to question 14 on page 4 and continue by completing items 14 and 15 and Part A.

5. Write below the name of the college, university, or professional school you attended during the past 1970-71 academic year.

(Name)

(City)

(State)

6. Is this the same college you attended in Fall, 1968?

Yes.....1 (14)

No.....2

7. What class standing did you have during the past 1970-71 academic year?

Junior.....1 (15)

Senior.....2

*Graduate or professional student.....3

*If you were a graduate or professional student, PLEASE ANSWER a and b below:

a. Toward what kind of graduate or professional degree were you working?

Master's degree in academic field.....1 (16)

Ph.D. degree in academic field.....2

M.D. (degree in medicine).....3

D.D.S. (degree in dentistry).....4

L.L.B. (degree in law).....5

B.D. (degree in divinity school).....6

Other (Circle and specify:.....)..7

b. In your opinion was your undergraduate major field of study in college the most appropriate major for a person entering your present graduate or professional curriculum?

Yes; it was directly related.....1 (17)

Yes and no; it was partly related.....2

No; it was mainly unrelated.....3

8. From the following list, circle the two-digit number corresponding to your undergraduate, graduate, or professional major field of study during the last year (1970-71). If you have not yet had to declare a major, circle the number of the field which you intended during the past year to declare as your major field of study. If you had a joint major field of study, circle the numbers of each department involved, but place an asterisk (*) beside the number of the main department.

<u>Agriculture and/or Forestry</u> 01	<u>Home Economics</u> 31 (18-19)
<u>Architecture and/or Design</u> 02	<u>Humanities</u> 32
<u>Biological Sciences (General Biology)</u> ...03	English language & literature.....33
Bacteriology, Molecular Biology,	Foreign languages & literature.....34
Microbiology.....04	Classical languages.....35
Biochemistry.....05	French.....36
General Botany.....06	German.....37
General Zoology.....07	Spanish.....38
Other Biological sciences.....08	Other foreign languages
	(including linguistics).....39
<u>Business, Commerce and Management</u> 09	History.....40
<u>Education</u> 10	Philosophy.....41
Elementary and/or secondary.....11	Religion & Theology.....42
Foundations.....12	Other Humanities fields.....43
Educational Psychology and	
counseling.....13	<u>Journalism</u> 44
Educational Administration.....14	<u>Library Science</u> 45
Other Education fields.....15	<u>Mathematics and Statistics</u> 46
<u>Engineering</u> 16	<u>Physical & Health Education</u> 47
Chemical.....17	<u>Physical Sciences</u> 48
Civil.....18	Chemistry.....49
Electrical.....19	Physics.....50
Mechanical.....20	Other physical sciences.....51
Other Engineering fields.....21	
<u>Fine Arts</u> 22	<u>Pre-law or Law</u> (use this code only
Art.....23	if this is a recognized major
Dramatics and Speech.....24	field of study at your school)....52
Other Fine Arts.....25	<u>Psychology</u> 53
<u>Geography</u> 26	<u>Social Sciences</u> 54
<u>Health Fields</u> 27	Anthropology & Archaeology.....55
Nursing.....28	Economics.....56
Pre-medicine or Medicine (use this	Political Science, Government.....57
code only if this is a recognized	Sociology.....58
major field of study at your school).29	Other social sciences.....59
Other health fields.....30	<u>All other fields</u> 60

9. During the past academic year how many hours of credit did you earn? (Write the number in the space provided.)

_____ hours (20-21)

10. Of the total number of credit-hours you have described in Item 9, how many of them were earned in the same broad field of study which includes your major field during the past year? (Broad fields of study are underlined in Item 8.) For example, if your specific major was Chemical Engineering, you should indicate below the total number of credit-hours you earned in all engineering courses last year.)

_____ hours (22-23)

11. In which of the following extracurricular groups have you been an active participant during the past academic year? (Circle as many as apply.)

Afro-American studies group (or related concerns).....1	(24)
Campus group concerned with supporting an organized political party or a political candidate.....2	(25)
Campus group concerned with local issues (parietal hours, women's curfew hours, etc.).....3	(26)
Campus group concerned with national or world issues (SDS, Vietnam Committee, Draft Committee, etc.).....4	(27)

Item continued on following page.

Editorial staff or campus publications.....5	(28)
Fraternity (active member, etc.).....6	(29)
Pre-professional student association (Engineering Assn., Pre-med. club, etc.).....7	(30)
Student government organization.....8	(31)
Other (Circle and specify: _____)....9	(32)

12. Listed below are a number of awards and honors. Which of these have you received during the past year? (Circle as many as apply.)

Name on Dean's list.....1	(33)
Elected to Phi Beta Kappa, Sigma Xi, or other honor society based on academic achievement.....2	(34)
Won scholarship, fellowship, or assistantship based on academic record.....3	(35)
Won prize or award for literary, musical, or artistic work.....4	(36)
Won prize or award for scholarship or research work (e.g., "Smith prize for best biology experiment").....5	(37)
Other award or honor (Circle and specify: _____) 6	(38)
No special honors.....7	(39)

13. Has your campus experienced any student protests or demonstrations during the past academic year?

*Yes.....1	(40)
No.....2	

*If YES: PLEASE ANSWER a and b BELOW:

a. Briefly describe the main goals of the most memorable demonstration on your campus during the past year: (41)

b. How would you characterize your attitude toward this demonstration on your campus.

Strongly approved.....1	(42)
Approved but with reservations.....2	
Can't decide; haven't made up mind.....3	
Disapprove but with reservations.....4	
Strongly disapprove.....5	

14. During the past year have you been active in civil rights, political, social action, or other demonstrations?

*Yes, very active.....1	(43)
*Yes, moderately active.....2	
No, only nominally.....3	
No, I haven't been involved at all.....4	

*If YES: Briefly describe the main goals of the demonstrations in which you have been active:

15. During the past academic year did you participate in any Peace, May Day, or other protest activities or student strikes?

*Yes.....1 (45)
No.....2

*If YES, check the appropriate descriptive phrases below which indicate how you participated (check as many as are appropriate):

Cut one or more classes in observance of protest.....1 (46)
Attended a rally or seminar.....2
Attended all the scheduled activities.....3
Helped to plan and organize the activities.....4
Other (Please specify: _____).....5

Part A--Personal Orientations

INSTRUCTIONS: In the following items you are asked to report your own attitudes, opinions, and feelings regarding a variety of subjects. We are interested in how you feel about these subjects at the present time. Remember your answers will be held in the strictest confidence. We are interested only in statistical relationships and will under no circumstances report responses on an individual or university basis.

Please indicate your agreement or disagreement with each of the following statements. Circle the number corresponding to your degree of agreement with each statement; numbers on the rating scale should be interpreted as follows:

- 1 -- Strongly disagree
2 -- Disagree with reservations
3 -- Can't decide; agree as much as disagree
4 -- Agree with reservations
5 -- Strongly agree

PLEASE ANSWER EVERY ITEM IN THIS SECTION

	<u>Disagree</u>			<u>Agree</u>			
16. An important goal for me is being efficient and successful in practical affairs.	1	2	3	4	5	(7)	
17. If I were a university professor and had the necessary ability, I would prefer to teach science courses rather than poetry.	1	2	3	4	5	(8)	
18. People who hate our way of life should still have a chance to talk and be heard.	1	2	3	4	5	(9)	
19. I would enjoy being an actor on the stage.	1	2	3	4	5	(10)	
20. If cities and towns around the country need help to build more schools, the government in Washington ought to give them the money they need.	1	2	3	4	5	(11)	
21. The U. S. must be willing to run any risk of war which may be necessary to prevent the spread of Communism.	1	2	3	4	5	(12)	
22. One of the most important goals of higher education should be to prepare students to aid disadvantaged persons.	1	2	3	4	5	(13)	
23. This country would be better off if we just stayed home and did not concern ourself with problems in other parts of the world.	1	2	3	4	5	(14)	
24. Most public officials are not really interested in the problems of the average man.	1	2	3	4	5	(15)	
25. I enjoy participating in long, serious philosophical discussions.	1	2	3	4	5	(16)	
26. Scientific or mathematical articles do not appeal to me.	1	2	3	4	5	(17)	
27. No matter what a person's political beliefs are, he is entitled to the same legal rights and protections as anyone else.	1	2	3	4	5	(18)	
28. I don't care much for going to art galleries and looking at collections of sculpture and paintings.	1	2	3	4	5	(19)	
29. If Negroes are not getting fair treatment in jobs and housing, the government in Washington should see to it that they do.	1	2	3	4	5	(20)	
30. Pacifist demonstrations--picketing missile bases, peace walks, etc.--are harmful to the best interest of the American people.	1	2	3	4	5	(21)	

Part A--Personal Orientations

	Disagree			Agree			
31. Generally, I prefer to work with things rather than people.	1	2	3	4	5	(22)	
32. The United States should give economic help to the poorer countries of the world even if they can't pay for it.	1	2	3	4	5	(23)	
33. These days a person doesn't really know whom he can count on.	1	2	3	4	5	(24)	
34. One of the best ways to improve colleges and universities is to increase the practical value of college courses.	1	2	3	4	5	(25)	
35. In my opinion most criticisms of modern science are unwarranted and misdirected.	1	2	3	4	5	(26)	
36. I believe in free speech for all no matter what their views might be.	1	2	3	4	5	(27)	
37. When I go to the theater I enjoy seeing the ballet or similar imaginative performances.	1	2	3	4	5	(28)	
38. The government in Washington ought to see to it that everybody who wants to work can find a job.	1	2	3	4	5	(29)	
39. The U. S. has no moral right to carry its struggle against Communism to the point of risking the destruction of the human race.	1	2	3	4	5	(30)	
40. I plan to be active in the cause of eliminating poverty and ghettos.	1	2	3	4	5	(31)	
41. The United States should keep soldiers overseas where they can help countries that are against Communism.	1	2	3	4	5	(32)	
42. Nowadays, a person has to live pretty much for today and let tomorrow take care of itself.	1	2	3	4	5	(33)	
43. I would dislike managing a corporation or business enterprise.	1	2	3	4	5	(34)	
44. A career in scientific research does not appeal to me.	1	2	3	4	5	(35)	
45. Nobody has a right to tell another person what he should and should not read.	1	2	3	4	5	(36)	
46. I am bored by recordings of the works of composers such as Bach and Beethoven.	1	2	3	4	5	(37)	
47. The government ought to help people get doctors and hospital care at low cost.	1	2	3	4	5	(38)	
48. It is contrary to my moral principles to participate in war and the killing of other people.	1	2	3	4	5	(39)	
49. I don't blame anyone for trying to remain free from commitments to others.	1	2	3	4	5	(40)	
50. The United States should give help to foreign countries even if they are not as much against Communism as we are.	1	2	3	4	5	(41)	
51. In spite of what some people say, the lot of the average man is getting worse, not better.	1	2	3	4	5	(42)	
52. An essential function of education is to prepare students for practical achievement and financial reward.	1	2	3	4	5	(43)	
53. I enjoy problems which require me to draw my own conclusions from some data or a body of facts.	1	2	3	4	5	(44)	
54. You can't really be sure whether an opinion is true or not unless people are free to argue against it.	1	2	3	4	5	(45)	
55. I am interested in the historical development of art, music, and drama.	1	2	3	4	5	(46)	
56. The government should leave things like electric power and housing for private businessmen to handle.	1	2	3	4	5	(47)	
57. The real enemy today is no longer Communism but rather war itself.	1	2	3	4	5	(48)	
58. I feel that I must be committed to helping other people, no matter what other goals I set for myself.	1	2	3	4	5	(49)	
59. It's hardly fair to bring a child into the world with the way things look for the future.	1	2	3	4	5	(50)	

Part A--Personal Orientations

60. I am more interested in the critical analysis of principles and theories than in their practical applications.	1	2	3	4	5	(51)
61. From the standpoint of a career field, I am more interested in the humanities than in the sciences.	1	2	3	4	5	(52)
62. Unless there is freedom for many points of view to be presented, there is little chance that the truth can ever be known.	1	2	3	4	5	(53)
63. It puzzles me why some people will so avidly read and discuss Shakespeare's plays.	1	2	3	4	5	(54)
64. Pacifism is simply not a practical philosophy in the world today.	1	2	3	4	5	(55)
65. I tend to be more realistic than idealistic, more occupied with knowing things as they are than with trying to change things.	1	2	3	4	5	(56)
66. I would enjoy doing an experiment designed to test a scientific theory.	1	2	3	4	5	(57)
67. I would not trust any person or group to decide what opinions can be freely expressed and what must be silenced.	1	2	3	4	5	(58)
68. I enjoy talking about music, theater, and other art forms with people who are interested in them.	1	2	3	4	5	(59)
69. In my opinion American colleges and universities place too much emphasis upon education in the sciences.	1	2	3	4	5	(60)
70. Freedom of conscience should mean freedom to be an atheist as well as freedom to worship in the church of one's choice.	1	2	3	4	5	(61)
71. I find it hard to get interested in most of the great books in the history of human thought.	1	2	3	4	5	(62)

INSTRUCTIONS: Please indicate your responses to the following items by circling the number corresponding to the alternative that best expresses your position.

72. Do you feel that the U. S. is losing power in the world or is it becoming more powerful.
If LOSING POWER: How much does this disturb you--a great deal, somewhat, or very little?
- Losing power, and disturbed a great deal.....1 (63)
Losing power and disturbed somewhat.....2
Losing power and disturbed very little.....3
Becoming more powerful.....4
Staying the same.....5
Don't know.....6
73. Which of the statements below comes closest to expressing how you feel about the state of morals in this country at the present time?
- They are pretty good and getting better.....1 (64)
They are pretty good, but getting worse.....2
They are pretty bad, but getting better.....3
They are pretty bad, and getting worse.....4
Don't know, or the same as ever.....5
74. How do you feel about the following statement: "The Federal government is gradually taking away our basic freedoms."
- Agree.....1 (65)
Disagree.....2
Don't know.....3
75. Do you agree or disagree with the statement, "In the past 25 years this country has moved dangerously close to Socialism."
- Disagree.....1 (66)
Agree.....2
Don't know.....3

Part A--Personal Orientations

76. How great a danger do you feel that American Communists are to this country at the present time--a very great danger, a great danger, some danger, hardly any danger, or no danger?
- A very great danger.....1 (67)
- A great danger.....2
- Some danger.....3
- Hardly any danger.....4
- No danger.....5
- Don't know.....6
-
77. Are you in favor of desegregation, strict segregation, or something in between?
- Desegregation.....1 (68)
- In between.....2
- Segregation.....3
-
78. Some people say that the government in Washington should see to it that white and Negro children are allowed to go to the same schools. Others claim that this is not the government's business. Have you been concerned enough about this question to favor one side over the other?
- *Yes.....1 (69)
- No.....2
-
- *If YES, which of the following best expresses your position?
- Favor school integration and mind made up.....1 (70)
- Favor school integration but have some reservations.....2
- Against school integration but have some reservations.....3
- Against school integration and mind made up.....4
-
79. What if you had children the school board said must be taken a little farther from home by bus in order to achieve school integration. Do you feel you should go along with the decision, try to have it changed, or what?
- Go along with decision.....1 (71)
- Not sure; it depends.....2
- Try to change decision.....3
-
80. Which of these statements would you agree with?
- Whites have a right to keep Negroes out of their neighborhoods. Feel strongly.....1 (72)
- Whites have a right to keep Negroes out of their neighborhoods. Feel not too strongly.....2
- Negroes have a right to live wherever they can afford to. Feel not too strongly.....3
- Negroes have a right to live wherever they can afford to. Feel strongly.....4
- Don't know; haven't made up mind about residential integration.....5
-
81. Some people feel that if Negroes are not getting fair treatment in jobs the government in Washington ought to see to it that they do. Others feel that this is not the federal government's business. Have you had enough interest in this question to favor one side over the other?
- *Yes.....1 (73)
- No.....2
-

Item continued on following page.

Part 3--Personal Orientations

- *If YES, which of the following best expresses your position?
- Favor federal intervention to secure fair job treatment....1 (74)
- With some reservations, favor federal intervention to secure fair job treatment.....2
- With some reservations, oppose federal intervention to secure fair job treatment.....3
- Oppose federal intervention to secure fair job treatment...4
-
82. Congress passed a bill that says that Negroes should have the right to go to any hotel or restaurant they can afford, just like white people. Some people feel that this is something the government in Washington should support. Others feel that the government should stay out of this matter. Have you been interested enough in this to favor one side over another?
- *Yes.....1 (75)
- No.....2
-
- *If YES, which of the following best expresses your position?
- Favor federal intervention to secure integrated public accommodations, and mind made up.....1 (76)
- With some reservations, favor federal intervention to secure integrated public accommodations.....2
- With some reservations, oppose federal intervention to secure integrated public accommodations.....3
- Oppose federal intervention to secure integrated public accommodations.....4
-
83. Do you happen to belong to any organizations that sometimes take a stand on housing, better government, school problems, or other public issues?
- No.....1 (7)
- Yes.....2
-
84. When you get together with your friends would you say that you discuss political and social issues frequently, occasionally, or never?
- *Frequently.....1 (8)
- *Occasionally.....2
- Never.....3
-
- *If FREQUENTLY OR OCCASIONALLY, which of the statements below best describes the part you yourself take in these discussions with your friends?
- Even though I have my own opinions, I usually just listen..1 (9)
- Mostly I listen, but once in a while I express my opinion..2
- I take an equal share in the conversation.....3
- I do more than just hold up my end in the conversation; I usually try to convince others that I am right.....4
-
85. Have you ever written or talked to your Congressman or Senator or other public officials to let them know what you would like them to do on a public issue you were interested in?
- Yes, frequently.....1 (10)
- Yes, occasionally.....2
- No.....3
-
86. In the last four years have you worked for the election of any political candidate by doing things like distributing circulars or leaflets, making speeches, or calling on voters?
- Yes, I worked intensively on occasion.....1 (11)
- Yes, but only nominally.....2
- No.....3
-
87. Have you attended any meetings in the last four years at which political speeches were made?
- Yes, frequently.....1 (12)
- Yes, occasionally.....2
- No.....3

Part A--Personal Orientations

88. In the last four years have you contributed money to a political party or to a candidate for a political office?

Yes.....1 (13)
No.....2

89. Which of the following do you consider important requirements for a satisfying job or career?
(Circle one in each row.)

	Highly important	Moderately important	Slightly important	Un- important	
a. Provide me an opportunity to use my special abilities and aptitudes.....	1	2	3	4	(14)
b. Provide me with a chance to earn a good deal of money.....	1	2	3	4	(15)
c. Give me an opportunity to live and work in the world of ideas.....	1	2	3	4	(16)
d. Provide me an opportunity to work on the application of knowledge to practical affairs.....	1	2	3	4	(17)
e. Provide me an opportunity to work on theoretical problems regardless of practical value.....	1	2	3	4	(18)
f. Permit me to be creative and original....	1	2	3	4	(19)
g. Give me social status and prestige.....	1	2	3	4	(20)
h. Give me opportunities to work with people rather than with things.....	1	2	3	4	(21)
i. Enable me to look forward to a stable, secure future.....	1	2	3	4	(22)
j. Leave me relatively free of supervision by others.....	1	2	3	4	(23)
k. Give me a chance to exercise leadership..	1	2	3	4	(24)
l. Provide me with adventure.....	1	2	3	4	(25)
m. Give me an opportunity to be helpful to others.....	1	2	3	4	(26)

NOTE: If you did not attend a college or university as an undergraduate student during the past 1970-71 academic year, please skip to page 16 (omitting Parts B and C of the questionnaire) and read the final Note.

If you did attend a college or university as an undergraduate student during the 1970-71 academic year, please continue by completing Parts B and C below.

Descriptions of Your University Environment

NOTE: The purpose of this section is to obtain information about your university environment during the past school year.

Although you answered a similar set of items last year, your environment has undoubtedly changed in several respects since you last reported. We want to study permanence and change in college environments and to relate such changes to the development of student attitudes and career plans.

You are asked to be a reporter about those parts of your university you have known best. You have lived in a particular environment, participated in its activities, seen its features, and sensed its expectations and demands. What kind of place was it?

Remember, your responses will be kept confidential; no person, except those working on this research project, will ever see your responses. Your responses will be used only to study the effects of different environments upon career plans and attitudes. There are no "right" or "wrong" answers; so please answer the questions honestly and try to estimate the degree to which the statements below characterized your university environment last year.

Descriptions of Your University Environment

INSTRUCTIONS FOR PART B: Statements in PART B are about faculty members with whom you have had most of your courses or have known best during the past year--their courses and teaching methods, their values and emphases, and their formal and informal interactions with you. The ratings you make here may or may not correspond to the ratings you would make of faculty members in other parts of the college or university. We do not want you to describe all faculty members in your school. Think only of the teachers with whom you have had most of your courses or known best during the past year. We want you to describe their behavior and the effects of their behavior upon you.

DIRECTIONS: Please rate your teachers according to the degree to which each of following statements describes their behavior, or the effects of their behavior upon you. The numbers in the rating scale should be interpreted as follows:

- 1 -- Strongly disagree; highly uncharacteristic and almost always false as a description of them.
- 2 -- Mostly disagree; mostly false as a description of them.
- 3 -- Neither agree nor disagree; true about as often as it was false as a description of them.
- 4 -- Mostly agree; mostly true as a description of them.
- 5 -- Strongly agree; highly characteristic and almost always true as a description of them.

CIRCLE THE NUMBER WHICH CORRESPONDS TO YOUR RATING FOR EACH DESCRIPTION

How the rating scale is to be used can be illustrated with the following statement:

"The faculty participated with students in many out-of-class activities."

If you should "mostly agree" that this statement characterized your teachers last year you would mark as follows:

The faculty participated with students in many out-of-class activities. Disagree Agree
1 2 3 4 5

PLEASE ANSWER EVERY ITEM IN PART B

PART B--DESCRIPTIONS OF FACULTY MEMBERS

	Disagree			Agree			
90. They often stressed the limited usefulness of the concepts and methods of science.	1	2	3	4	5	(7)	
91. They encouraged students to do graduate work.	1	2	3	4	5	(8)	
92. They offered many really practical courses designed to prepare the student for his occupation.	1	2	3	4	5	(9)	
93. They showed no interest in tracing the sources of their specialized field of study to philosophical or humanistic movements in the history of ideas.	1	2	3	4	5	(10)	
94. They were sensitive to student complaints and grievances and frequently tried to remedy the situation.	1	2	3	4	5	(11)	
95. They were not unusually skillful in getting to know students as individuals.	1	2	3	4	5	(12)	
96. They stressed the value of the objective methods of science in finding answers to empirical questions.	1	2	3	4	5	(13)	
97. They spent little or no time counseling students about opportunities for graduate study in their field.	1	2	3	4	5	(14)	
98. They usually tried to give the student the practical training he will need in his career field.	1	2	3	4	5	(15)	
99. They frequently encouraged students to take courses in the humanities.	1	2	3	4	5	(16)	

PART B--DESCRIPTIONS OF FACULTY MEMBERS

	Disagree			Agree			
100. Students having difficulty with their courses could not expect to get special tutoring or counsel from them.	1	2	3	4	5	(17)	
101. They really talked <u>with</u> the students, not just at them.	1	2	3	4	5	(18)	
102. They sometimes criticized the trivial problems on which many scientists choose to work.	1	2	3	4	5	(19)	
103. They showed little interest in recruiting students into their field of study.	1	2	3	4	5	(20)	
104. Very few of their courses were aimed at preparing the student for his vocation.	1	2	3	4	5	(21)	
105. They seemed to have very little interest in drama or the arts.	1	2	3	4	5	(22)	
106. They expected the undergraduate to get by almost completely on his own resources.	1	2	3	4	5	(23)	
107. They took a personal interest in me and my work.	1	2	3	4	5	(24)	
108. They encouraged student interest in understanding developments in modern science.	1	2	3	4	5	(25)	
109. They tried to persuade qualified students to seek advanced training in their field of study.	1	2	3	4	5	(26)	
110. They frequently expressed the belief that the main purpose of college is to prepare the student for his vocation.	1	2	3	4	5	(27)	
111. They tried to get students interested in the humanities.	1	2	3	4	5	(28)	
112. Their counseling and guidance were really personal, patient, and extensive.	1	2	3	4	5	(29)	
113. I never got to know any of them well enough to count them as good friends.	1	2	3	4	5	(30)	
114. It was obvious that they believed the American college has over-emphasized education in the sciences.	1	2	3	4	5	(31)	
115. They taught their courses as if most of their students were going into graduate study.	1	2	3	4	5	(32)	
116. Their courses tended to make students more practical and realistic.	1	2	3	4	5	(33)	
117. Student interest in understanding and criticizing important works in art, music, and drama was encouraged by the faculty.	1	2	3	4	5	(34)	
118. They tried to restrict appointments for planning study programs to one or two periods of the year.	1	2	3	4	5	(35)	
119. They were typically warm and friendly in their relations with me.	1	2	3	4	5	(36)	
120. They frequently encouraged students to take elective courses in the sciences.	1	2	3	4	5	(37)	
121. They did not present much information about careers in their field of study.	1	2	3	4	5	(38)	
122. Very few of their courses here will be useful to students who go into business or industry.	1	2	3	4	5	(39)	
123. They had little appreciation for scholarship in the humanities.	1	2	3	4	5	(40)	
124. They often discussed the students' goals with them and tried to help them discover their special talents.	1	2	3	4	5	(41)	
125. They seemed to feel that teachers should maintain a certain amount of "emotional distance" from students.	1	2	3	4	5	(42)	

PART B--DESCRIPTIONS OF FACULTY MEMBERS

126. Are most of the faculty members you have just described in your major field of study as described in Item 8?

Yes.....1 (43)

No.....2

PART C--DESCRIPTIONS OF STUDENT ASSOCIATES

INSTRUCTIONS FOR PART C: Statements in PART C are about the university student colleagues you knew best during the past year. Your answers to this part should tell us what was generally characteristic of the students you knew best, identified with, or associated with most commonly during the past year. The ratings you make for your personal associates in your school may or may not correspond to the way you would rate students in general or other groups of students at your university.

Describe only those students you knew best and associated with most commonly during the past year. They may be students in your major field, living quarters, or other campus groups.

DIRECTIONS: Follow the same rating directions shown for Part B.

PLEASE ANSWER EVERY ITEM IN PART C

	<u>Disagree</u>					<u>Agree</u>	
127. They had strong interest in poetry, music, painting, sculpture, architecture, etc.	1	2	3	4	5	(7)	
128. Most of them felt their teachers had helped them to achieve greater direction, force, and clarity.	1	2	3	4	5	(8)	
129. We rarely had much time for play or recreation.	1	2	3	4	5	(9)	
130. Books dealing with psychological problems or personal values were widely read and discussed by them.	1	2	3	4	5	(10)	
131. They were continually urging others to write their Congressman or Senator or other public officials to let them know what we wanted them to do on a public issue.	1	2	3	4	5	(11)	
132. Few of them were eager to go out and start working in the practical world.	1	2	3	4	5	(12)	
133. Many of them owned sports cars.	1	2	3	4	5	(13)	
134. They talked frequently about the philosophy and methods of science.	1	2	3	4	5	(14)	
135. They felt that students should be actively engaged in solving social problems.	1	2	3	4	5	(15)	
136. Most of my friends were planning to enter careers which required graduate or professional degrees.	1	2	3	4	5	(16)	
137. They felt that students should be given greater responsibility for their own education and given greater freedom in designing their courses of study.	1	2	3	4	5	(17)	
138. They would regard a student who insisted on analyzing and classifying art and music as a little odd.	1	2	3	4	5	(18)	
139. They were generally dissatisfied and disappointed with their teachers.	1	2	3	4	5	(19)	
140. Their parties were frequent and a lot of fun.	1	2	3	4	5	(20)	
141. They had very little interest in the analysis of value systems, and the relativity of societies and ethics.	1	2	3	4	5	(21)	

PART C--DESCRIPTORS OF STUDENT ASSOCIATES

142. They felt that political activities by students had no place on a college campus.	1	2	3	4	5	(22)
143. They often complained that their college courses were not giving them the practical training they will need in their career fields.	1	2	3	4	5	(23)
144. Most of them came from wealthy families.	1	2	3	4	5	(24)
145. They would have very little interest in attending a lecture by a prominent scientist.	1	2	3	4	5	(25)
146. Mostly they felt it was not the university's role to solve all of society's problems.	1	2	3	4	5	(26)
147. Few of them were seriously considering occupations which demand advanced graduate or professional training.	1	2	3	4	5	(27)
148. Mostly they felt that demonstrations to demand greater student power had no place on a college campus.	1	2	3	4	5	(28)
149. A lecture by an outstanding poet or dramatist would attract very few of them.	1	2	3	4	5	(29)
150. Most of my associates were grateful to the faculty for showing them a way of life worthy of imitation.	1	2	3	4	5	(30)
151. Our gathering places were typically active and noisy.	1	2	3	4	5	(31)
152. They would have little interest in a lecture by a visiting philosopher or theologian.	1	2	3	4	5	(32)
153. During the last year they took on a heavy load of active political work in support of their issues and candidates.	1	2	3	4	5	(33)
154. They often talked about the jobs that will be available to them after graduation from college.	1	2	3	4	5	(34)
155. Many of them had to work part-time to pay their college expenses.	1	2	3	4	5	(35)
156. They rarely took any more science courses than were required.	1	2	3	4	5	(36)
157. They often complained that their course work was not relevant to contemporary life and problems.	1	2	3	4	5	(37)
158. Some of them had much interest in doing research in their field of study.	1	2	3	4	5	(38)
159. Most of them believed that drastic changes are desirable in order to increase student participation in decision-making in the university.	1	2	3	4	5	(39)
160. When they got together they often talked about trends in art, music, or the theater.	1	2	3	4	5	(40)
161. They were often caught up in the contagious enthusiasm of their teachers.	1	2	3	4	5	(41)
162. There weren't many opportunities for us to get together in extracurricular activities.	1	2	3	4	5	(42)
163. They frequently debated social and political problems far into the night.	1	2	3	4	5	(43)
164. Generally speaking, they had little or no interest in politics.	1	2	3	4	5	(44)
165. They tended to look down on students who insisted on evaluating courses in terms of how well they prepared one for a job.	1	2	3	4	5	(45)
166. Few of them ever expected to become wealthy.	1	2	3	4	5	(46)

PART C--DESCRIPTIONS OF STUDENT ASSOCIATES

	<u>Disagree</u>			<u>Agree</u>			
167. Most of my friends had strong interests in science and mathematics.	1	2	3	4	5	(47)	
168. They had little or no interest in working with volunteers on ameliorative community projects.	1	2	3	4	5	(48)	
169. Many of them had a strong desire to contribute to their field of study.	1	2	3	4	5	(49)	
170. They had little sympathy for student power advocates who disrupt the functioning of the university.	1	2	3	4	5	(50)	
171. They often went to concerts and art exhibits when they were available.	1	2	3	4	5	(51)	
172. They had strategies for helping each other to meet the faculty's requirements with less work.	1	2	3	4	5	(52)	
173. We seldom went to movies, parties, etc., on the spur of the moment.	1	2	3	4	5	(53)	
174. Long, serious philosophical discussions were common among them.	1	2	3	4	5	(54)	
175. They felt obliged to participate at every opportunity in the political process.	1	2	3	4	5	(55)	
176. They were more concerned about taking interesting courses than courses directly useful in their vocations.	1	2	3	4	5	(56)	
177. They were accustomed to having plenty of money.	1	2	3	4	5	(57)	
178. Few, if any, of them would like to engage in scientific research.	1	2	3	4	5	(58)	
179. Many of them felt that education would be improved if students were required to spend a year in community service at home or abroad.	1	2	3	4	5	(59)	
180. They had little interest in pursuing careers involving research or scholarship.	1	2	3	4	5	(60)	
181. They often argued that students should have greater control of faculty appointments and promotions.	1	2	3	4	5	(61)	
182. They seemed to have little appreciation for the fine or applied arts.	1	2	3	4	5	(62)	
183. They sometimes ridiculed the faculty's mannerisms and ideas with wild caricatures.	1	2	3	4	5	(63)	
184. Everyone of us had a lot of fun in college.	1	2	3	4	5	(64)	
185. They never talked very much about ethical perplexities.	1	2	3	4	5	(65)	
186. They were inclined to believe that student political activity was a waste of time since it has little or no effect upon government.	1	2	3	4	5	(66)	
187. Most of them believed that the main goal of a college education is to prepare the student for his vocational career.	1	2	3	4	5	(67)	
188. They tended to evaluate future jobs in terms of their intrinsic interest and had little concern about whether they offered one a chance to earn a great deal of money.	1	2	3	4	5	(68)	
189. Most of them were planning careers in science.	1	2	3	4	5	(69)	
190. They would be suspicious of students who continually insisted that the university must become more responsive to public demands.	1	2	3	4	5	(70)	
191. I expect some of them to become eminent persons in their major fields of study.	1	2	3	4	5	(71)	

PART C--DESCRIPTIONS OF STUDENT ASSOCIATES

	<u>Disagree</u>			<u>Agree</u>		
192. They had little or no interest in having students participate in determining undergraduate admissions policies.	1	2	3	4	5	(72)
193. Which group of students colleagues have you been mostly describing? (Circle as many as apply.)						
Students in my major field of study.....1						(73)
Campus group concerned with political or social issues.....						
Please specify type of group:.....2						(74)
Fraternity friends.....3						(75)
Dormitory or living quarters group.....4						(76)
Other (Circle and specify:.....).....5						(77)

A FINAL NOTE

You have now completed the questionnaire. Please fold it and return it in the enclosed stamped envelope to Project B, Department of Psychology, Vanderbilt University, Nashville, Tennessee 37203. Your replies to this questionnaire are completely confidential; absolutely no information of any kind about specific persons will be released to your school or to anyone else.

A report of this project will be sent to all respondents who complete each of the survey questionnaires; in addition, information will be sent to such respondents concerning scientific and professional journals in which more detailed accounts of the findings will be reported.

If you have comments on any of the issues covered in this questionnaire, please send them under separate cover to the above address.

THANK YOU FOR YOUR COOPERATION